



System Release 7.14

ASTRO® 25 INTEGRATED VOICE AND DATA

FIRE STATION ALERTING

November 2013

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About Fire Station Alerting

This manual provides information related to system implementation, optimization, operation, maintenance, and troubleshooting of Fire Station Alerting (FSA) which can be integrated with the ASTRO® 25 system infrastructure.

Fire Station Alerting (FSA) can be implemented with either FSA4000 or MACH Alert.

The FSA4000 solution can use either the Alerting Master Computer (AMC) with Alerting LAN Computers (ALC) dispatch clients or the FSA4000 Aux I/O without the AMC and the ALCs.

The MACH Alert Fire Station Automation and Alerting (FSAA) system provides a browser-based solution for the successful operation of the Fire and Rescue alerting process. The MACH Alert system can be integrated into existing communication systems. It provides redundancy and enables tailoring the system based on specific Fire and EMS needs. Like the FSA4000 solution, the MACH Alert FSAA system is based on the Motorola ACE3600 high-performance controller and operates on Motorola ASTRO® 25 IVD system infrastructure.

What Is Covered In This Manual?

This manual contains the following chapters:

- *Fire Station Alerting Description on page 27*, provides a high-level description of a Fire Station Alerting system and the function it serves on your system. Both the FSA4000 and MACH Alert solutions are described.
- *FSA4000 Theory of Operation on page 57*, explains how the FSA4000 system works in the context of an ASTRO® 25 system.
- *FSA4000 Installation on page 67*, details installation procedures relating to FSA4000.
- *FSA4000 Configuration on page 139*, details configuration procedures relating to FSA4000.
- *FSA4000 Optimization on page 153*, contains optimization procedures and recommended settings relating to FSA4000.
- *FSA4000 Operation on page 155*, details tasks to perform once the FSA4000 system is installed and operational on your system.
- *FSA4000 Troubleshooting on page 169*, provides fault management and troubleshooting information relating to FSA4000.
- *FSA4000 Reference on page 173*, contains supplemental reference information relating to FSA4000.
- *FSA4000 Disaster Recovery on page 177*, contains information on how to recover the FSA4000 devices.
- *FSA4000 ARTA Kit on page 203*, contains information about the ARTA kit installation.

Useful Background Information

Motorola offers a variety of courses designed to assist in learning about the system. For information, go to <http://www.motorolasolutions.com/training> to view the current course offerings and technology paths.

Related Information

Refer to the following documents for associated information about the radio system.

Related Information	Purpose
<i>Standards and Guidelines for Communication Sites</i>	<p>Provides standards and guidelines that should be followed when setting up a Motorola communications site. Also known as the <i>R56</i> manual.</p> <p>This may be purchased on CD 9880384V83, by calling the North America Parts Organization at 800-422-4210 (or the international number: 302-444-9842).</p>
<i>System Documentation Overview</i>	<p>For an overview of the ASTRO® 25 system documentation, open the graphical user interface for the ASTRO® 25 system documentation set and select the System Documentation Overview link. This opens a file that includes:</p> <ul style="list-style-type: none">• ASTRO® 25 system release documentation descriptions• ASTRO® 25 system diagrams• ASTRO® 25 system glossary <p>For an additional overview of the system, review the architecture and descriptive information in the manuals that apply to your system configuration.</p>

Chapter

1

Fire Station Alerting Description

This chapter provides a high-level description of the Fire Station Alerting (FSA) feature and the function it serves on your system. FSA can be implemented using either the FSA4000 solution or MACH Alert solution. For information on MACH Alert, see *MACH Alert for Fire Station Alerting on page 33*.

Recommended Manuals

Use the following documentation in conjunction with this manual to install an FSA4000 system:

- *ACE3600 RTU Owners Manual*
- *FSA4000 Audio Control Tone (ACT) Module Owners Manual*
- *FSA4000 Dispatch Software User Guide*
- *FSA4000 Configuration Tool User Guide*
- *FSA4000 Report Generator User Guide*
- *Windows Supplemental Configuration Manual*

Use the documentation provided with the MACH Alert Fire Station Automation and Alerting (FSAA) system, in conjunction with this manual, to install a MACH Alert system.

FSA4000 System Overview

FSA4000 systems manage resources with hardware and software that can reduce the emergency cycle time, and also streamline the emergency response process. The FSA4000 system can be deployed in two basic configurations:

- FSA4000 server/client configuration – a typical configuration based on the Alerting Master Computer (AMC) and dispatch clients.
- FSA4000 Aux I/O – it reuses a console-developed Aux I/O solution; it does not include the Alerting Master Computer (AMC) and Alerting LAN Computers (ALC).

FSA4000 Server/Client Configuration

FSA4000 is a subsystem that uses the data transport portion of the ASTRO® 25 IV&D system. FSA4000 carries out data calls over the air from the command center to multiple fire stations using IV&D. It also uses IV&D to monitor and control multiple fire station facilities. FSA4000 is an “add-on” application to the ASTRO® 25 trunked two-way radio system.



Note: In FSA4000, the term “IV&D” can refer to both trunking and conventional systems.

The FSA4000 Server/Client configuration is based on a server – AMC (Alerting Master Computer) – and dispatch clients.

FSA4000 is used to alert the fire station personnel in a timely manner to go en-route to a fire or an emergency situation. FSA4000 also enables the fire station first responders to be alerted by a tone and an incident-specific voice

message from the operator. That way the appropriate fire station apparatus (trucks and other equipment) are dispatched as quickly and efficiently as possible. The software automatically controls lights and also routes heart saver tones with a dispatch audio to the selected first responder zones in the fire stations. Heart saver tones are an alert devised to protect the health of the responders. This type of alert lessens the risk of a heart attack caused by a sudden, loud alert. When the system sounds the heart saver tone, the alarm volume gradually increases.

FSA4000 offers the following features:

- Dispatches emergency calls to multiple stations.
- Divides the station into zones. Only the required ones respond to the alert.
- Uses pre-recorded tones and custom audio messages that can be heard either throughout the station, or in chosen station zones, or apparatuses (depending on system configuration).
- Supports apparatus alerting and dynamic apparatus assignment to a fire station/zone; it can also indicate the status of each apparatus in the system. Apparatus statuses include: Equipment In Quarters, Equipment Dispatched, Equipment Out and Available, and Equipment Out of Service.
- Multi Group Alerting GUI (Graphic User Interface) – an optional feature dividing stations into groups and subgroups for better usability when several dispatchers work in one alerting center.
- Automatic talkgroup assignment that supports parallel voice alerting.
- Delivers two-way data communications and automatically logs each event.
- Automatically secures the station using the same equipment used for alerting.
- Optional FEP redundancy.
- Optional server (AMC) redundancy.
- Enables an operator to monitor, supervise, and control the fire stations and appliances.

An optional server redundancy feature (applicable only if two AMCs have been defined) provides the following benefits:

- Supports a configuration of one or more FEPs, with or without FEP redundancy,
- Supports the manual mode of server switching,
- Supports the test mode that enables a specific client to use the backup server (instead of the active server) for testing purposes,
- Active and backup servers maintain full data synchronization. When server switch occurs, the backup server is already updated with all changes made using the active server.



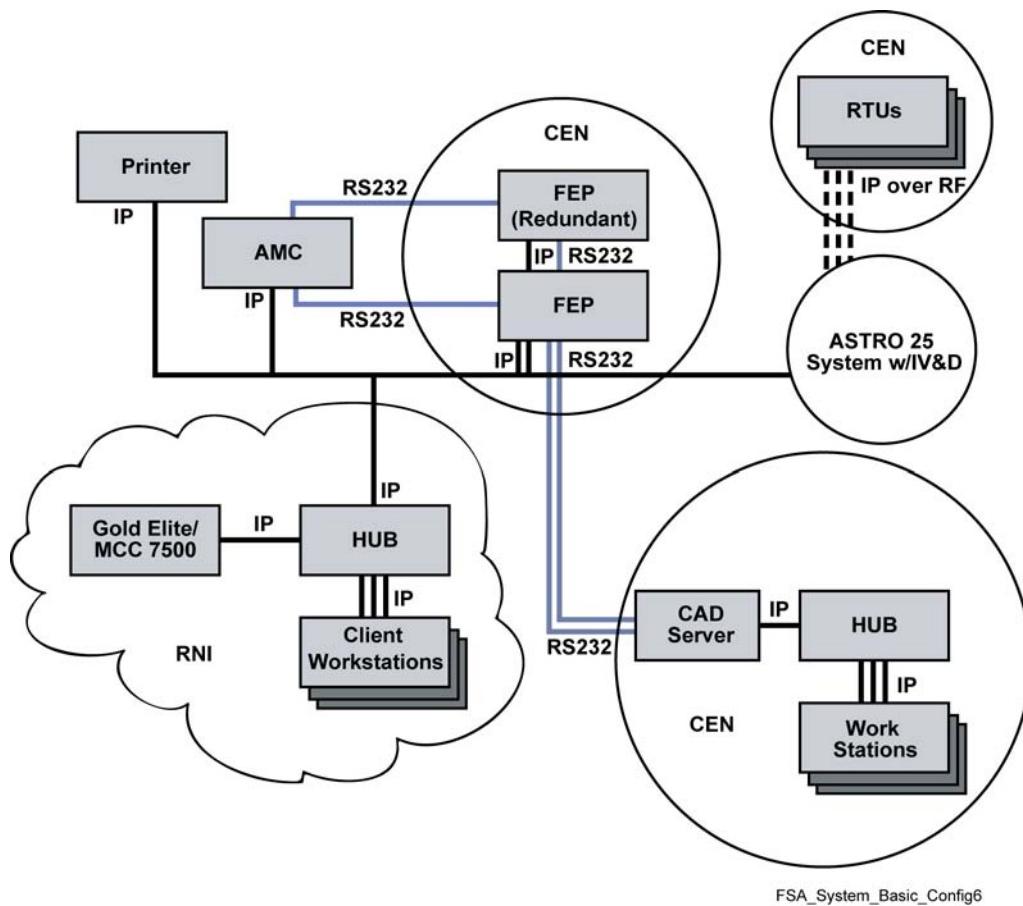
Note:

All clients use the server that is currently active.

When a manager switches the active FSA4000 server manually, and a CAD interface is in use, then each CAD client should be connected to the FEP(s) of the new active server.

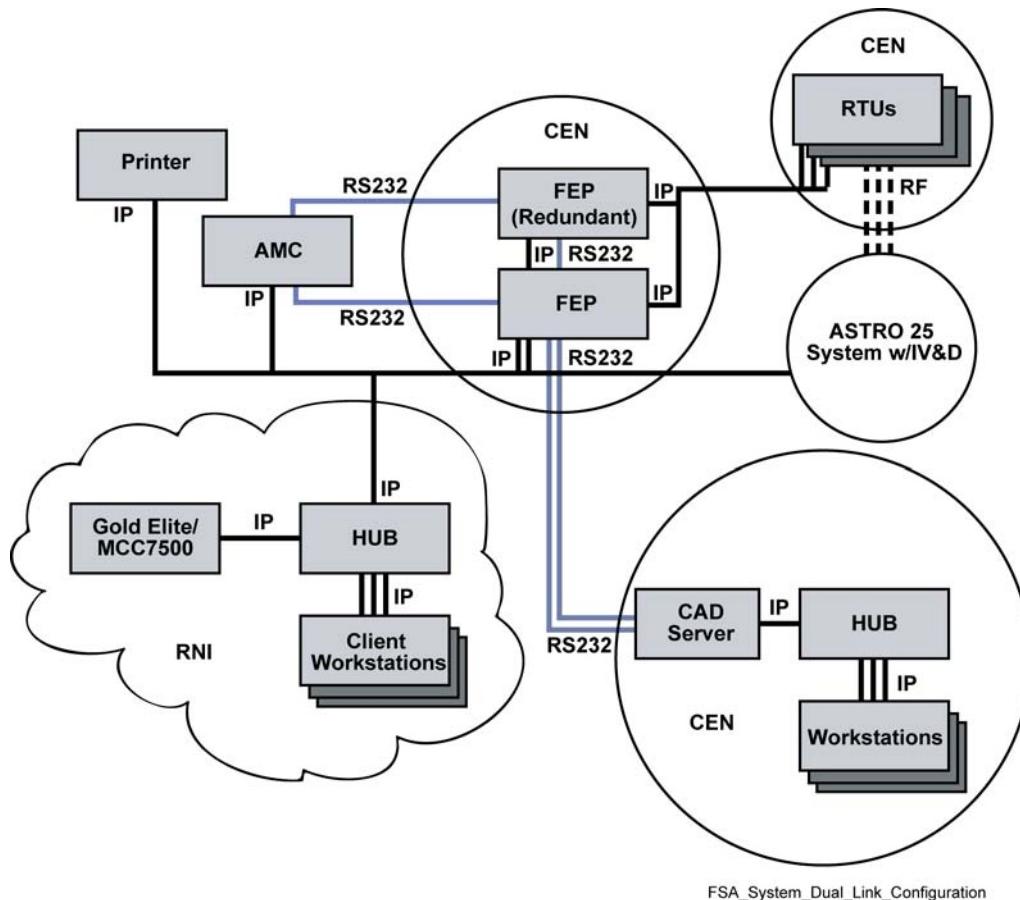
See [Figure 1: FSA4000 System Basic Diagram on page 29](#) for an illustration of a basic FSA4000 system.

Figure 1: FSA4000 System Basic Diagram



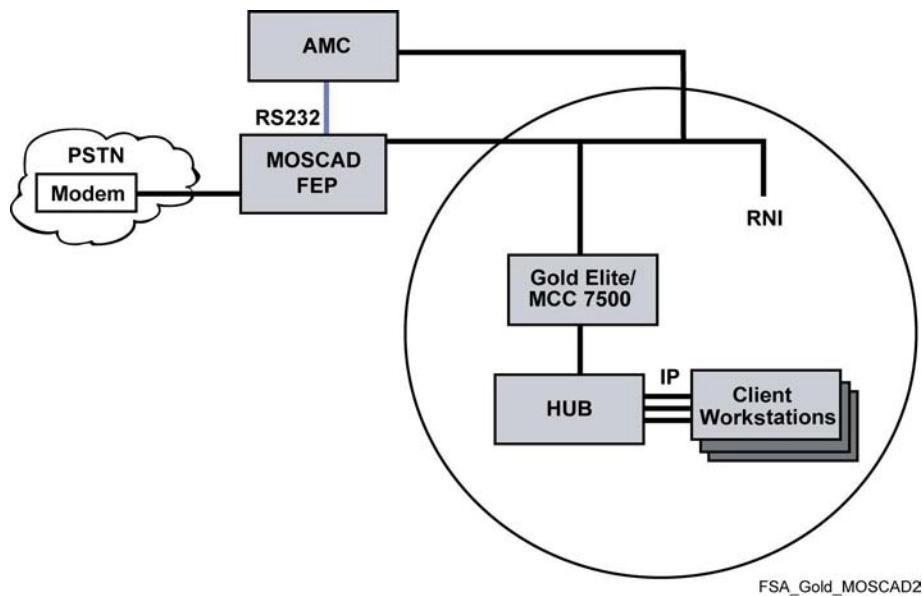
FSA_System_Basic_Config6

See [Figure 2: FSA4000 System Dual Link Diagram on page 30](#) for an illustration of a dual link FSA4000 system.

Figure 2: FSA4000 System Dual Link Diagram

FSA_System_Dual_Link_Configuration

Figure 3: FSA4000 System When it Coexists with Consoles on page 30 shows the FSA4000 system when it coexists with the CENTRACOM Gold Elite or MCC 7500 consoles.

Figure 3: FSA4000 System When it Coexists with Consoles

FSA_Gold_MOSCAD2

FSA4000 Aux I/O Overview

The FSA4000 Aux I/O is another solution for the Fire Station Alerting suite which does not include the AMC (server) and ALCs (clients) and reuses console-developed Aux I/Os. FSA4000 Aux I/O provides a fire station alerting solution for small cities and countries. The solution is based on the standard console application, used as the fire station alerting dispatch application and communicating with the FSA4000 alerting subsystem through the Aux I/O interface.

The FSA4000 Aux I/O subsystem uses the IV&D (Integrated Voice & Data) data transport portion of the ASTRO® 25 radio system to send fire alert messages over-the-air from an Operations Center to fire stations, as well as to monitor and control fire station facilities. The Operations Center is normally where dispatchers at console operator positions generate voice communications.

Similar to the typical FSA4000 subsystem (client/server configuration), the FSA4000 Aux I/O feature enables Operations Center dispatchers to use selectable tone sequences to alert fire station first responders in various zones within their fire stations, as well as to alert any apparatus (for example, engine, ladder, or an ambulance) at a fire station. It can also enable remote control of fire station devices such as doors, lights, security system, and appliances to accommodate fire fighters departing to incident scenes as quickly as possible.

The alerting GUI application is located on the console (CENTRACOM Gold Elite, MCC 5500, or MCC 7500) which was configured for FSA application. The GUI application contains a button for each applicative DI in the FEP. Pressing a button in the GUI application triggers a relay at the console which in turn is attached to a DI in the FEP.

Beside the ASTRO® 25 IVD communication media, the FSA4000 Aux I/O subsystem supports the following: IP, analog conventional, or analog trunking. For higher reliability, the FSA4000 Aux I/O subsystem can support a dual link configuration.

FSA4000 Aux I/O offers the following features:

- Dispatches emergency calls to multiple stations. Supports up to 24 fire stations.
- Divides a station into zones. Only the required ones respond to the alert. Supports apparatus alerting, static apparatus assignment to a fire station/zone and the ability to indicate if an apparatus is in the station. Each fire station can have up to 5 zones (zones alerting mode) or 15 apparatuses (apparatus alerting mode).
- Uses pre-recorded tones and custom audio messages that can be heard either throughout the station, in chosen station zones, or in chosen apparatuses (depending on system configuration).
- Delivers two-way data communication and automatically logs each event.
- Automatically secures the station using the same equipment as used for alerting.
- Enables an operator to monitor, supervise, and control the fire stations and appliances.
- Supports up to eight I/O modules in the FEP; each module can be configured with 16/32 DIs (digital inputs) or 8/16 DOs (digital outputs).
- Supports a maximum of 224 DIs and 112 DOs.
- Optional Printer – when a printer is configured and connected to a serial port of the FEP, the FEP logs any alert and RTU statuses on this printer.

For more information on the operation and configuration of the system, refer to the *FSA4000 Configuration Tool User Guide*.

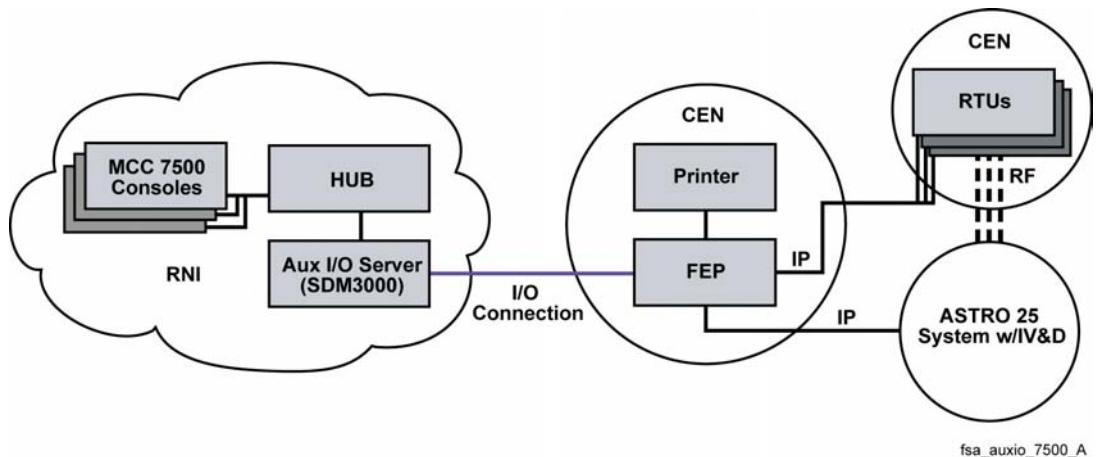
For information on wiring I/O modules, see:

- Digital Output Relay Module section in the *ACE3600 RTU Owners Manual*
- Digital Input Module section in the *ACE3600 RTU Owners Manual*

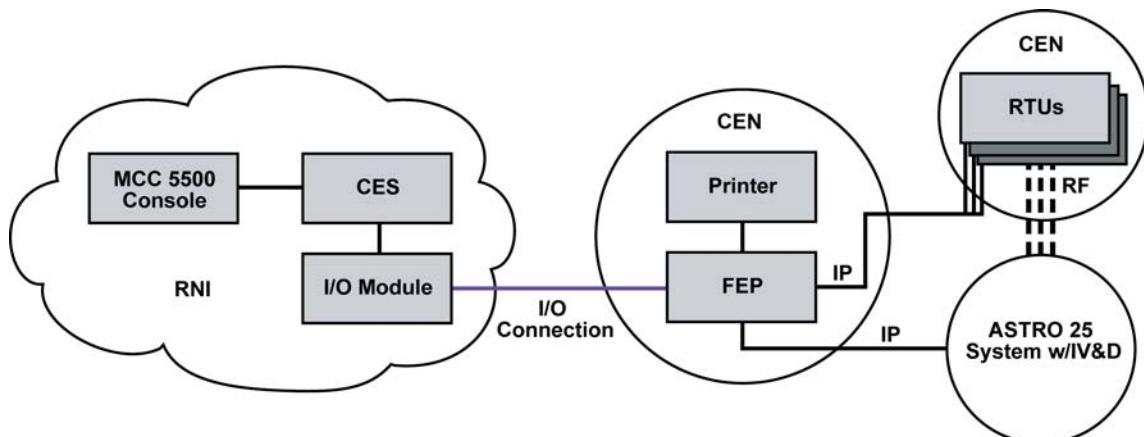
See [Figure 4: FSA4000 Aux I/O with MCC 7500 Console on page 32](#), [Figure 5: FSA4000 Aux I/O with MCC 5500 Console on page 32](#), and [Figure 6: FSA4000 Aux I/O with CENTRACOM Gold Elite Console on page 32](#) for an illustration of the FSA4000 Aux I/O with MCC 7500, MCC 5500, and CENTRACOM Gold Elite consoles.



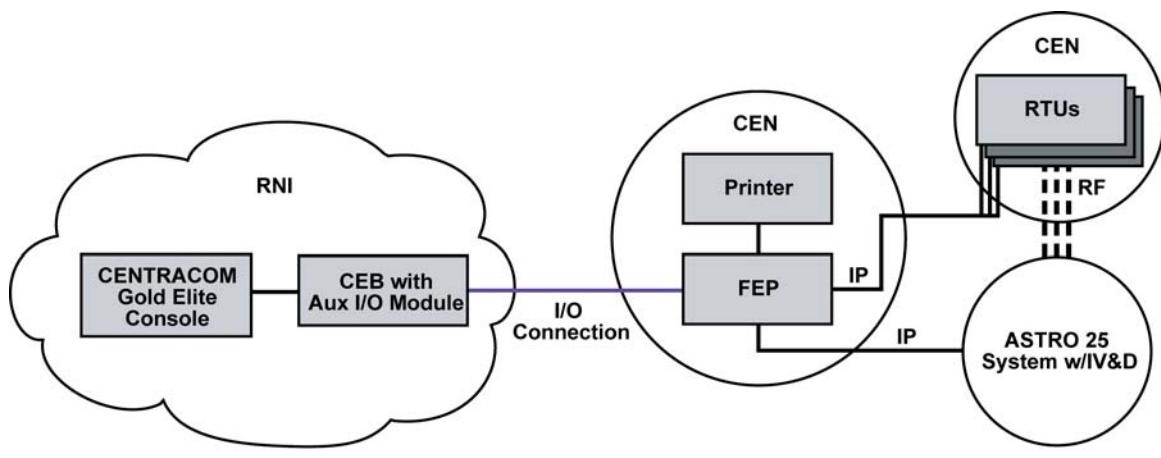
Note: The FEP and the printer are a part of the CEN (Customer Enterprise Network) and are colocated at the dispatch site.

Figure 4: FSA4000 Aux I/O with MCC 7500 Console

fsa_auxio_7500_A

Figure 5: FSA4000 Aux I/O with MCC 5500 Console

fsa_auxio_5500_A

Figure 6: FSA4000 Aux I/O with CENTRACOM Gold Elite Console

fsa_auxio_goldeelite_A

FSA4000 Configuration Tool

The FSA4000 Configuration Tool is a Microsoft Windows™-based software application that enables its users to create and deploy FSA4000 applications. The tool is used to define and configure all elements of an FSA4000 system. It also generates the project files. Next, it downloads them to the Alerting RTUs and FEPs and prepares to load onto the AMCs and ALCs.

The FSA4000 Configuration Tool works together with ACE3600 System Tools Suite (STS). Each FSA4000 application is built for a certain version of the ACE3600 system software and is used on an RTU/FEP of that version or higher. In the FSA4000 system, the ACE3600 System Tools Suite (STS) is only used to download the ACE3600 system upgrades to the RTUs/FEPs.

For additional information, see the *FSA4000 Configuration Tool User Guide*.

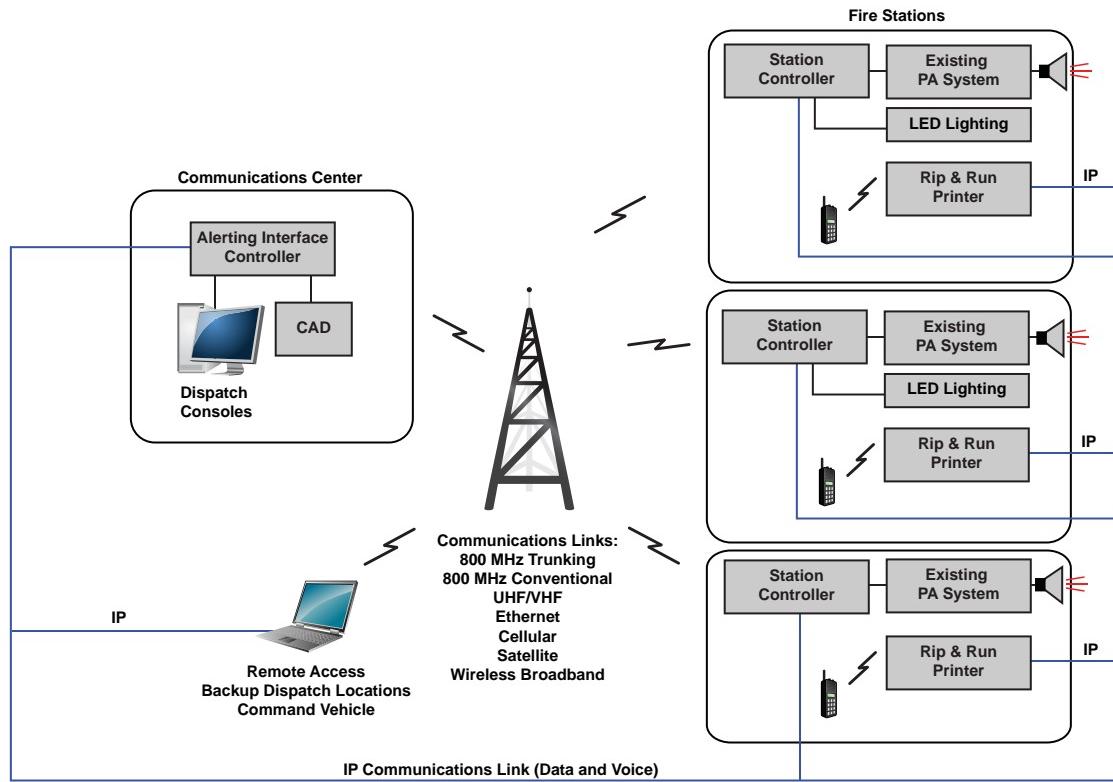
MACH Alert for Fire Station Alerting

This section provides an overview of the MACH Alert Fire Station Alerting solution.

MACH Alert - System Overview

MACH Alert is a fire station alerting solution from DcR Engineering Services, Inc that can be integrated into your ASTRO® 25 communication system. The MACH Alert Fire Station Alerting system provides dual link reliability, fire station monitoring, and control. This MACH Alert solution consists of an Alerting Interface Controller (AIC), Station Controllers (SC), and Dispatch Consoles. The major components of the MACH Alert Fire Station Automation and Alerting (FSAA) system are shown in the following figure.

Figure 7: MACH Alert Fire Station Automation and Alerting (FSAA) System Diagram



FSA_System_Arch_A

Alerting Interface Controller

The Alerting Interface Controller (AIC) is based on the Motorola ACE3600 controller (UL 508A certified) located at the dispatch console sites mounted in a standard 19" equipment rack. The AIC interfaces with the Computer Aided Dispatch (CAD) system, the FSA Server, existing FM two-way radio system, and the Ethernet network. The AIC directs the flow of data (tone alerts) over both communications links (radio and IP), manages automated CAD station alerting, transmits text-to-speech incident announcement and manual voice announcements from dispatch to the alerted fire stations, controls transmission Acknowledgments ("ACK") between the fire station controllers and the CAD, sends system event logging to the FSA4000 Server, and manages all alarm notifications between dispatch and the fire station controllers.

The AIC also controls communications between the CAD, dispatch consoles, and all fire stations. It processes incident information from the CAD, or manual dispatch commands from the consoles, and sends the alerting command (alert tones) to the fire stations over both the existing radio system and existing Ethernet (IP) network. It also receives and processes inputs from the station controllers (manual or automated "ACK"s, system and equipment alarm notifications, and dispatch console notification to begin manual voice announcements)



Note: The Alerting Interface Controller (AIC) used with the MACH Alert solution provides a function similar to the Front End Processor (FEP) used with the FSA4000 solution.

Station Controller

The Station Controller (SC) is based on the Motorola ACE3600 controller (UL 508A certified). The SC is located at each fire station identified as the NEMA-1 wall-mount industrial panel. The SC processes information to and from the AIC, generates alert tones, and provides station audio control including backup text-to-speech decoding. It includes a total of thirty two (32) integrated digital inputs and outputs and sixteen (16) high-current output relays used for station zoning and auxiliary station functions.

The SCs communicate with the AIC over both the existing FM two-way radio system and the existing Ethernet (IP) network. When the stations are alerted, the SC instructs the integrated "ACTIVE" tone and audio module to generate the ramped alert tones and activate the station's existing audio PA amplifiers and speakers. The alert tones are followed by the dispatch operator's live voice announcement, or automated CAD text-to-speech incident announcement, or the station controller's CAD text-to-speech incident announcement if the main fire voice radio should fail. The SCs also interface with the rip run printers.



Note: The station controller used with the MACH Alert solution provides a function similar to the RTU used with the FSA4000 solution.

MACH Alert – Features

The MACH Alert Fire Station Automation and Alerting system is a full featured solution, which meets and exceeds the FSA4000 solution. *Table 1: MACH Alert and FSA4000 Solutions– Feature Comparison on page 34* below compares the MACH Alert features with those of the FSA4000.

Table 1: MACH Alert and FSA4000 Solutions– Feature Comparison

Feature	FSA4000	MACH Alert
Operation over ASTRO® IV&D	Yes	Yes
Based on Motorola ACE3600 Platform	Yes	Yes
Web Based Client Server	No	Yes
Client Operation on MCC7500 Thick Web Server Assigned Client Licenses	No	Yes
Client with any screen resolution	No	Yes

Table continued...

Feature	FSA4000	MACH Alert
Redundant Communications Links (2)	Yes	Yes
Redundant Communications Links (3)	No	Yes
Redundant FEP/Server	Yes	Yes
Station Capacity	127	127
CAD Interface	Yes	Yes
CAD Text to Speech	No	Yes
Report Utility	Yes	No
User Configuration Capability	Yes	Yes
Station Alerting	Yes	Yes
Bunk Room Alerting	4	8
Apparatus Alerting	Yes	Yes
Bed Side Alerting	No	Yes
Rip Run Printer at Station	No	No
Integrated Wiring Demarcation in RTU	No	Yes
Bunkroom Assignment in Station	No	Yes
Day Night Mode	Yes	Yes
Audio Time for Recorded Audio	1.5	33
Support of more than 32 DI/DO	No	Yes
Individual Door Control	No	Yes
Turn Out Timer LED Display	No	Yes
Illuminated Mushroom Button	No	Yes
Incident Display Board	No	Yes
Stack Lights	No	Yes
Adjustable LED Egress Lighting	No	Yes

FSA4000 System Equipment

A basic FSA4000 system consists of the following:

- One Alerting Master Computer (AMC)
- Up to 40 Alerting LAN Computers (ALC)
- One ACE3600 Front End Processor (FEP) and an optional redundant FEP (For Dynamic System Resilience systems, two FEPs are required for each zone: one for the primary core and one for the back-up core. A maximum of six FSA4000 FEPs are supported per subsystem, either single or redundant. With this configuration, only three zones in a DSR configuration could be supported by a single FSA4000 subsystem).
- Up to 127 ACE3600 Remote Terminal Units (RTUs)
- Optional interface to the Computer Aided Dispatch (CAD) network
- FSA4000 Dispatch Software (InTouch application)

- FSA4000 Report Generator application (optional)
- Voice radio at the RTU
- Amplifier (provided by your organization)
- Speakers (provided by your organization)
- Printer (optional)
- FSA4000 ARTA Kit (optional)

ACE3600 Remote Terminal Unit (RTU)

An RTU is a unit located at each of the fire stations within a system. The RTU receives commands from the FEP. Then it closes relays or sends commands through its RS-232 ports to control the devices at the fire station. In addition, sensors can be connected to the RTU that in turn forwards the sensor information to the FEP.

The fire station RTU is based on the ACE3600 hardware platform with ASTRO® 25 system digital, analog, and trunking radio support.

It is placed in the fire station to accomplish the following tasks:

- Receive and analyze alerts.
- Control and operate the Audio Control Tone (ACT) module relay.
- Scan Digital Inputs (DI) to collect data from on-site sensors.
- Inform the FEP on each Change Of State (COS).
- Operate Digital Outputs (DO) according to the FSA4000 operator request.
- When ARTA feature is enabled, assign automatic talkgroup to the voice radio.

Each ACE3600 RTU has 16 Digital Inputs (DI) and 16 Digital Outputs (DO). It automatically controls sequencing and audio control with only one transmission from the FEP.

The RTU contains an ACT hardware module to interface to the Public Address (PA) system. It controls up to six audio zones (five switched zones and one common zone). The ACT module serves as a player of recorded voice and alarm sounds. It also routes low-level audio signals from the voice talkgroup audio to the Fire Station Public Address amplifier. The ACT module supports up to eight 30-second or (when Apparatus feature is enabled) thirty 8-second tones or messages (alert sequences) that are tailored for your organizations individual requirements. The ACT module supports ramped heart saver tones in which the alarm tones gradually increase in volume. Moreover, it directly records tones from the laptop of the support personnel. Finally, it can connect a voice radio to the PA system (see [Figure 8: ACE3600 RTU on page 37](#)).

When the ARTA feature is enabled, the ACE3600 RTU contains a Motorola Standard Radio Interface Box (RIB) that converts the RS-232 hardware interface to Motorolas SB9600 Serial Bus interface, which is native to the voice radios. The RIB ([Figure 9: Radio Interface Box with Bracket on page 37](#)) is connected on one side to the voice radio and on the other side to the ACE3600 RTU.

For more details on the RIB installation, see [FSA4000 ARTA Kit on page 203](#).

Figure 8: ACE3600 RTU



Figure 9: Radio Interface Box with Bracket



RTU Processing Functions

The processing functions of the ACE3600 RTU are:

- RTU I/O at the station
- Manual acknowledgment
- Local alerts
- Alert processing
- FEP communications
- Support of automatic talkgroup assignment to voice radios (optional)

RTU I/O Interface

The RTU supports a 16 Digital Input (DI) and Digital Output (DO) interface. The interface can be configured to support various input and output functions. One input is designated on the RTU I/O module for manual acknowledgment as required by NFPA (National Fire Protection Association) 1221. Acknowledge all voice dispatch alarms (see *Figure 10: ACE3600 RTU Input* on page 39 to *Figure 12: ACE3600 RTU Output Module* on page 40).

The RTU monitors the I/O module. If there is a failure, an I/O module failure is sent to the FEP.

The RTU inputs are:

- Digital inputs
- Alarm/status
- Local controls
 - Manual acknowledgment
 - Day/night (when using this feature the high level input from the PA must be wired to the normally open input and not to the normally closed input).
 - Local activations

The RTU outputs are:

- Digital outputs
- Control capability, for example:
 - Bay doors
 - Lights
 - Horns

Table 2: ACE3600 RTU I/O Modules**Figure 10: ACE3600 RTU Input**

FSA_RTU_DI

Figure 11: ACE3600 RTU Output

FSA_RTU_DO

Figure 12: ACE3600 RTU Output Module

FSA_RTU_DO_module

Manual Acknowledgment

The FSA4000 system provides the capability for a physical acknowledge button, which is located anywhere in the fire station including the fire watch room. The RTU supports six manual acknowledgment points (one per zone and one common) for alert sequences. Upon station alert, the relevant pre-configured DI is checked for manual acknowledgment. Thus, it indicates that somebody in the fire station has pushed the “Acknowledge Button” or the “Joker Switch” in response to a dispatch.

If the manual acknowledge mode of the system is configured to "stop PA", then pressing ALL defined manual acknowledge DIs before or during the PA causes PA termination in the RTU.



Note: The sequence is not stopped in the RTU, it is continued as designed without the PA part. Other alerted RTUs are not affected.

Local Alerts

A local alert is a physical device located at a fire station (or other building) that you can activate. The ACE3600 RTU supports the station local alert. Upon local DI operation (pre-configured), the RTU executes a special “local alert sequence” (also pre-configured).

Alert Processing

The alert processing functions of the ACE3600 RTU are:

- **Station alerting support:** The RTU receives alerts from the FEP, executes the alerting sequence, and also opens/closes DOs. However, the RTU that runs the alert sent by the FEP stops on its own at the end. Then the ACT module initiates the relevant tone and voice audio switching.
- **Remote stop station alerting:** The RTU supports remote stop station alerting. If a “stop alert” message is received from the FEP, the executed sequence is stopped immediately.
- **Local stop station alerting:** The RTU supports local stop station alerting. If the relevant DI is on, the RTU resets the executed alert sequence immediately.



Note: If the manual acknowledge mode of the system is configured to "stop PA", pressing the reset DI stops the alert execution for this specific RTU at the FSA4000 application as well as at the RTU.

Front End Processor (FEP) Communications

Front End Processor (FEP) communications are its connections to the AMC. In the FSA4000 Dispatch Software, the **FEP Communications** screen is a pop-up window. This window presents the status of all the links to all the existing FEPs (primary and secondary in all the defined FEP locations). The screen has a **Switch** button that implements a switch between the primary and secondary FEPs. FEP switch affects all dispatch applications on that same AMC. It does not affect the other servers in the system.

Audio Control and Tone (ACT) Module

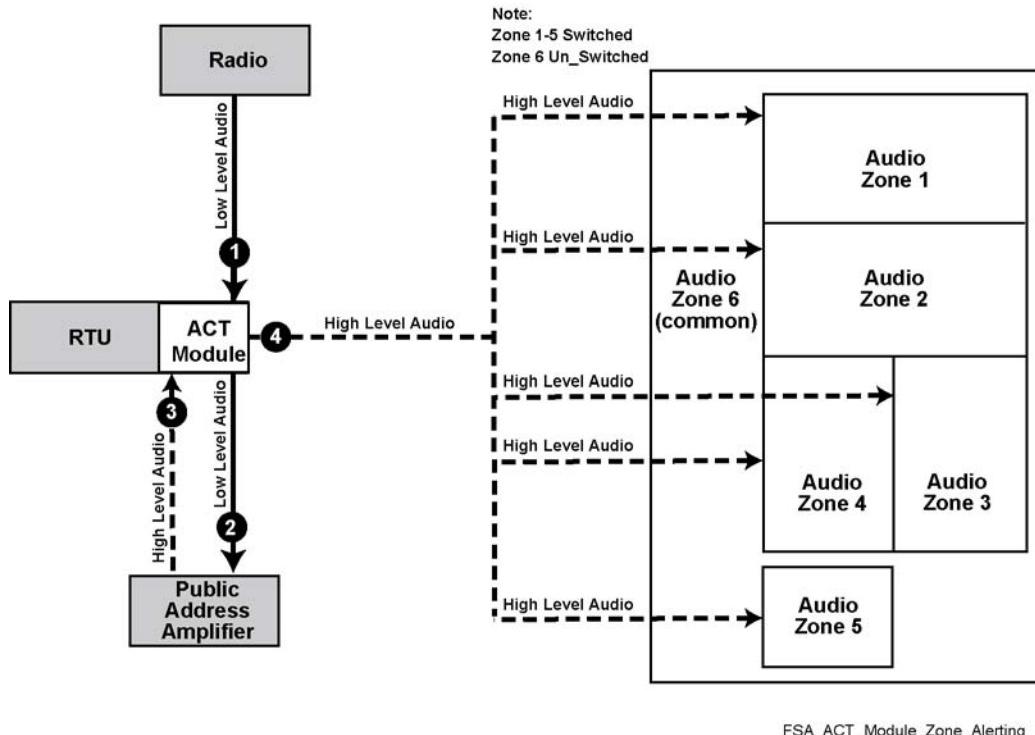
The Audio Control and Tone (ACT) unit serves as a player of recorded voice and alarm sounds. The ACT unit also routes low-level sound signals to high-level amplifiers. The high-level sound is routed back from the high-level amplifier through the ACT module. Then it is directed to specified alert speakers. Each set of six speakers makes a zone. Zones one through five are switched zones, and zone six is always a common zone.

The following figure illustrates an ACT module:

Figure 13: Audio Control and Tone (ACT) Module



The following figure illustrates the zone alerting process using an ACT module.

Figure 14: Zone Alerting through the ACT Module

Note: The zones used in this diagram are examples only. The zones in your system can vary.

The tones used in alert sequences are recorded and played using the ACT module in the station. In Zone layout systems, a different tone is defined for each zone in the station.

In Non-Zone (Station) layout systems when the apparatus feature is disabled, individual tones can be associated with specific personnel (for example, medical) or areas in the station. When the apparatus feature is enabled, individual tones can be associated with specific apparatuses, as well as areas in the station. When the apparatus feature is disabled, up to eight tones are configured. When the apparatus feature is enabled, you can configure 30 tones.

The ACT unit contains an internal audio memory that allows custom tones or audio sounds to be recorded and stored in the ACT unit. Recording of audio may be performed directly from a low-level output source (tape recorder, laptop, or radio output). The ACT unit is enclosed in a compact plastic box.

The ACT unit features are:

- Connects to the voice radio for audio.
- Controlled by the RTU through an RS-232 serial port using a simple instruction set.
- Digitally records audio signals (for example, alarm tones and voice announcements).
- Plays the stored audio signal.
- Interface to an external low-level audio signal source (microphone, radio audio out, and so on).
- Interface to input of one audio amplifier and up to two outputs of audio amplifiers.
- Connects up to six sets of speakers.
- Selective output to any combination of six speakers.
- Routes the audio signals from the amplifier output to the selected speakers.
- Routes data coming from the RTU to a serial printer, to allow printing of information by an alternative use of the RTU serial port.

The ACT unit has built-in hardware that records and stores the audio signals by digitizing the signal from an audio source. The audio source is connected directly to the low-level audio input of the unit. The unit plays these prerecorded audio signals once or repeatedly.



Note: For more information, see the *FSA4000 Audio Control Tone (ACT) Module Owners Manual*.

ACT Module Tester Fields and Buttons

Table 3: ACT Module Tester – Description of Fields and Buttons

Element	Description
Select Comm Port	Connects the FSA4000 ACT Module Tester Utility through RS-232 to the PC Comm port.
Connect	Connects to the ACT module.
Disconnect	Disconnects from the ACT module.
Test ACT	Opens the FSA4000 ACT Loader Test ACT screen.
Tone Configurations	Opens the FSA4000 ACT Module (Tone) Loader screen.
Select Tone to Play	Selects a tone from the list of recorded tones in the ACT module (8 tones for zone/station layout, 30 tones for apparatus layout.)
Play Tone	Plays the tone selected in the Select Tone To Plan drop-down list.
Enable PA	Enables the Public Address system.
Printer Test	Tests the printer. Sends a predefined set of strings to the printer attached to the ACT Module.
Zone Amplified Speaker Connection	Select which Zone speakers (1-6) are to be connected to the ACT module. Can be either to the Auxiliary (by default) or the Primary Amplifier.
[1-6] Zone buttons	Toggle buttons used to set each Zone speaker to either the Primary (closed relay) or Auxiliary (open relay) Amplifier.
Set All to Primary Button	Sets all six speakers to the Primary Amplifier.
Set All to Auxiliary Button	Sets all six speakers to the Auxiliary Amplifier.
Test Box	Performs the tests of the ACT Module features.
Current Output	Displays the current output from the ACT Module.
ACT Communication Log	Displays all commands and responses sent over the Comm Line.
Clear	Clears the entries in the ACT Communication Log.

Front End Processor (FEP)

An FEP is a CPU system located at a control or dispatch center with a radio and/or IP connectivity to all remote fire stations. An FEP provides the connectivity between RTU and alerting computers (CAD, ALC, and AMC). The FEP receives messages such as alert requests from the alerting computers and sends them to the RTUs located at each fire station. In addition, the FEP contains a database with information for the status (active/inactive, AC power failure, and so on) of each RTU in the field.

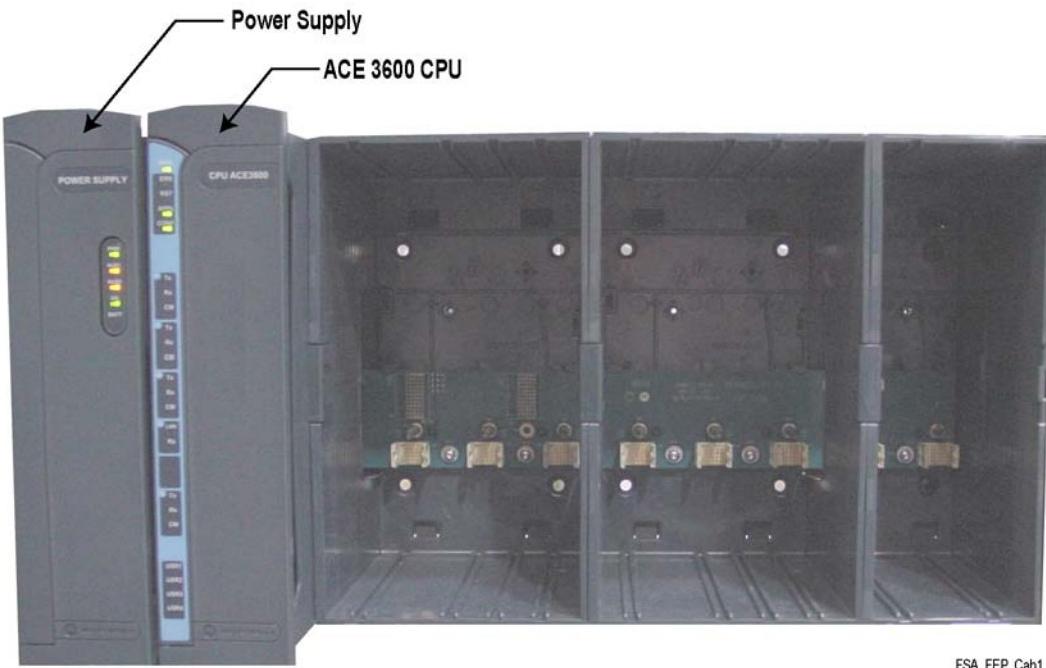
The FEP is based on the ACE3600 hardware platform. The FEP connects the ASTRO® 25 IVD system and ACE3600 RTUs with the AMC and ALC. It communicates with the GUI application. It receives alerts, answers interrogation requests. It also sends and receives data (alerts and interrogations) to and from all RTUs.

The FEP communicates in MDLC (Motorola Data Link Control) to the RTU. It also stores the data in a table that is accessible either through the RS-232 CAD protocol or the RS-232 protocol MODBUS. The FEP also provides

connectivity to the CAD system using Motorola Fire Dispatch Protocol (MFD-P). The FEP receives messages such as alert requests or formatted/unformatted text messages from the CAD systems. Next, it sends them to the ACE3600 RTUs in each fire station. In addition, the ACE3600 FEP contains a database with information about the status of each RTU in the fire stations. The information includes active/inactive, AC power failure, and so on.

Figure 15: Front End Processor (FEP) Module on page 44 shows an FEP module.

Figure 15: Front End Processor (FEP) Module



FSA_FEP_Cab1

Backup ACE3600 FEP

The FSA4000 subsystem provides an optional backup ACE3600 FEP. If the primary ACE3600 FEP fails, the dispatcher/operator can manually switch to the backup ACE3600 FEP, using the FSA4000 Dispatch Software.

For Dynamic System Resilience (DSR) systems, two FEPs are required for each zone: one for the primary core and one for the back-up core. A maximum of six FSA4000 FEPs are supported per subsystem (either single or redundant). With this configuration, only three zones in a DSR configuration can be supported by a single FSA4000 subsystem. (The DSR feature is not supported in FSA4000 Aux I/O systems).

Front End Processor Functions

The functions of the ACE3600 FEP are:

- Tracking RTU control and status
- Handling and tracing of alert sequences that are sent to the remote station
- Interrogation check of fire stations communication
- Automatic Daylight Savings Time (DST) adjustment, set in the FSA4000 Configuration Tool
- FEP alerting sequence
- Interface to the CAD and FSA4000 Dispatch Software
- Interface to the alerting GUI application located on the console, using FEP DIs and DOs.

Fire Station Control and Status Tracking

FSA4000 systems utilize two methods to obtain data:

- **Polling:** The FSA4000 central sends out a request to each RTU in the system. It asks for all data or for data that has changed since the last poll. It also collects a complete set of data from the RTU at the time of the polling request.
- **Report by Exception:** When an input of the RTU changes, the RTU automatically sends the change to the FEP.

The ACE3600 FEP contains a database with information for the status (active/inactive, AC power failure, and so on) of each RTU in the field. The administrator enables or disables each remote station, depending upon the system requirements. Disabling a station causes it to be nonfunctional and enabling a station causes it to be operational again. Disabling a link causes the RTU not to use that link. Enabling a link signals the FEP to renew the communication link to that station. Enabling/disabling a communication link is done through one of the FEP interfaces.

FEP supports a communication status failure indication with each of the alerted fire stations. The FEP stores all remote station statuses (Digital Inputs) and presents the data to its interfaces upon demand.

Tracking Last Alerted ID

The ACE3600 FEP supports receiving a last command failure indication or sending an indication to the GUI in case an RTU does not receive the alert. If multiple FEPs alert the same RTU simultaneously, the last alert sequence overrides all the previous ones. In dual link systems, this feature also prevents dual alerts from reaching the RTU.

Interrogation Check of Fire Stations Communication

The ACE3600 FEP interrogates the RTUs to gather information. The interrogation process does not activate any relays on the RTUs. It is simply an update of the values that are stored in the FEP. They reflect the current state of the RTU. Interrogations occur twice a day at a minimum. Interrogations can be classified into:

- **Scheduled interrogation (communication status for all stations):** The FEP supports a communication status failure indication with all the fire stations. It performs scheduled interrogation to all the remote fire stations twice a day (schedules are a configured parameter). In a dual link system, the scheduled interrogation takes place per each link.
- **Dispatcher Initiated interrogation (communication status for specific stations):** The FEP supports communication status failure indication with specific RTUs. One of the FEP interfaces initiates the interrogation to selected fire stations only.

Automatic Daylight Savings Time Adjustment

The ACE3600 FEP automatically adjusts its internal clock for daylight saving changes according to the daylight savings time (DST) system. You set up this adjustment using the FSA4000 Configuration Tool. For more information, see the *FSA4000 Configuration Tool User Guide*.

Front End Processor Alerting Sequence

An alerting sequence is a series of controls that are sent out from the FEP to the RTU during the alerting process. For instance, if 30 stations are alerted in a sequence, 30 individual messages are sent (1 per each station) for an IV&D system. However, if another link (IP) exists then it sends another message on that link.

Alerting Master Computer (AMC)

The Alerting Master Computer (AMC) is a computer that is equipped with a Windows platform and the InTouch software (FSA4000 Dispatch Software). It acts both as an operator central computer and as a server for other Alerting LAN Computers (ALCs). It interfaces with FEPs, using the MODBUS protocol through an RS-232 interface. The AMC supports up to two FEPs.



Note: Though the AMC can be used as an operator central computer, this function is not advised. The AMC does not contain a sound card, so it does not support audible indications.

The AMC provides the capability to automatically send alphanumeric alarm pages when there is an alarm at the fire stations. The paging package from Wonderware is a Windows-based software, which is known as SCADALarm. The

alphanumeric feature of SCADAlarm uses an external modem that comes with the software and sends descriptive alarm messages to alphanumeric capable pagers.

Alerting LAN Computer (ALC)

The Alerting LAN Computer (ALC) is a Windows PC that is equipped with InTouch Runtime Software and the FSA4000 Dispatch Software. It acts as an operation client computer with a graphical interface. The interface allows the operator to select fire stations, and various working zones with fire stations. The operator can also send fire alerting sequences. In that case, the interface displays the status of fire stations.

One AMC supports up to 40 ALCs. The ALCs can reside on the CENTRACOM Gold Elite or the MCC 7500 Console Dispatcher Positions. The system supports 40 consoles per server/dispatch center. There can be multiple dispatch centers, each with 40 consoles.

Computer Aided Dispatch (CAD)

The Computer Aided Dispatch (CAD) is a server. The CAD supports alert messages, status messages, PA time remaining status, and text messages. Alarms, acknowledgments, and control back-indications are not implemented on the CAD interface. The CAD system communicates with the FEP. The CAD to FEP connection is through the Motorola MOSCAD/CAD Protocol. To support the CAD management application, FEP supports the proprietary MFD-P application.

When the CAD sends text messages to the station printers, only one transfer request message is allowed per alert message. Sending multiple text transfer request messages per alert message significantly degrades the operation of the system.



Note: Configure the RTU and the FEP to support the printing of text messages. Install serial printers connected to MOSCAD at each fire station.

Voice Radio

A data radio is located at the RTUs in the FSA4000 system. To support voice dispatch at a station, a second voice only radio is needed.



Note: In order to interoperate with the FSA4000, conventional radios must have the latest software version .

Speakers

The ACT module sends audio output directly to the public address system speakers. The ACT module supports tones associated with each alert that is sounded through the speakers. More than one tone can be sent per alert. If a system is using zoning or staggered tones, all tones for the selected zones play in the station.

Printer

Report printing requires a printer and SQL Server Software. The FSA4000 application includes the report generator functionality. Reports can be printed from up to five clients. To print generated reports, connect the AMC to a printer.

FSA4000 Aux I/O System Equipment

An FSA4000 Aux I/O system consists of the following:

- Console computer with alerting GUI application and I/O interface
- Console Aux I/O server
- One ACE3600 Front End Processor (FEP) (see *Front End Processor (FEP) on page 43*)
- FEP I/Os

- Up to 24 ACE3600 Remote Terminal Units (RTU) (see [ACE3600 Remote Terminal Unit \(RTU\) on page 36](#))
- Voice radio at the RTU
- Amplifier (provided by your organization)
- Speakers (provided by your organization)
- Aux I/O Printer (optional)

Alerting GUI Application

The alerting application is the console's GUI application (CENTRACOM Gold Elite, MCC 5500 or MCC 7500) which was configured for the FSA4000 system.

The alerting GUI application contains a button for each applicative DI in the FEP. Pressing a button in the application triggers a console relay attached to a DI in the FEP.

For installation instructions, see the consoles (CENTRACOM Gold Elite, MCC 5500 or MCC 7500) installation and service manual on Motorola On Line (MOL).

FEP I/O

The FEP supports up to eight I/O modules. Each module can have either eight Digital Outputs, eight Digital Inputs, 16 Digital Inputs, or 32 Digital Inputs.

The FEP uses these I/O modules to communicate with the GUI application and send/receive data to all RTUs. The FEP converts the setting of its DIs into alert packets and sends them to the requested fire stations. It also translates any failure it receives from a fire station into a DO setting, if configured to do so. In order to connect the FEP DIs to the right relays of the console I/Os, it is recommended to use the system report printout of the FSA4000 Configuration Tool, which details the functionality of the DIs and DOs of the FEP.

The FEP I/O is based on the same hardware as the RTU I/O (see [Figure 10: ACE3600 RTU Input on page 39](#) and [Figure 11: ACE3600 RTU Output on page 39](#)).

Each FEP DI may be assigned the following functionality:

- Start an alert
- Stop an alert
- Send an alert to all fire stations
- Send an alert to a specific fire station (station alerting mode)
- Send alert to a specific zone in a specific fire station (zone alerting mode)
- Send alert to a specific apparatus in a fire station (apparatus alerting mode)

Each FEP DO may be assigned the following functionality:

- PA indicator (flashes in the last five seconds of the dispatchers PA)
- Alert select error (DO is set when the user triggers a wrong combination of DIs of the FEP)
- Monitoring one or more of the following failures at a specific fire station (or more than one fire station):
 - Site communication failure
 - Last command failure
 - AC power failure
 - I/O module failure
 - ACT module failure
 - Manual acknowledgment

Aux I/O Printer

The printer is physically attached to a serial port of the FSA4000 FEP and can also be replaced with Hyper Terminal software. Using the printer, the FSA4000 FEP logs information regarding alert, operator activities, station alarms, station events, and system activities.

FSA4000 Dispatch Software

The FSA4000 Dispatch Software enables operators to alert pre-configured remote fire stations. It also monitors events (status and alarms) from the fire stations. Finally, it checks the communication links to the fire stations. You can provide the relevant fire stations with more detailed incident-specific information. To do it, use the “Over the Air” voice channel.

In addition, the FSA4000 Dispatch Software enables you to define and configure elements of the FSA4000 system. For example, you can configure, time and date updates or interrogation hours.

The FSA4000 Dispatch application includes the following major functions:

- **ModbusSerial DAServer:** To communicate with the FEP, the FSA4000 Dispatch Software uses the ModbusSerial DAServer. This function is only available on the AMC.
- **SuiteLink:** The FSA4000 Dispatch Software uses SuiteLink in order for the AMC to communicate with the ALC.
- **Alerting capabilities:** The FSA4000 Dispatch Software enables the operator to alert zoned and non-zoned stations, apparatuses, and groups of stations (in Multi Group Alerting GUI).
- **Apparatus:** The FSA4000 Dispatch Software enables the operator to move fire station apparatuses from one station to another, or from one zone to another, and change assignment of DIs to which the apparatuses are attached (if assignment permission is granted by the administrator).
- **Station monitoring capabilities:** The FSA4000 Dispatch Software gives the operator information regarding all the status alarms configured for the RTU.
- **Station communication:** The FSA4000 Dispatch Software enables the operator to check the communication links to all the pre-configured remote fire stations.
- **Logging:** The FSA4000 Dispatch Software logs all alerts, alarms, and events.
- **Cohabitation:** The FSA4000 Dispatch Software can optionally cohabit on the same station (CENTRACOM Gold Elite or MCC 7500) as the consoles application.

Motorola Fire Dispatch Protocol (MFD-P)

MFD-P is the protocol with which the CAD communicates with the FEP. MFD-P specifies the format of simple ASCII-based messages used to communicate with software applications using an RS-232C interface. The FEP provides an interface to the fire station RTUs. It receives alert requests from the CAD and responds to RTU status requests from the CAD.

The following are messages sent from the CAD to the FEP:

- Alert Request
- Text Transfer Request
- Station Status Request
- Heartbeat Request
- Redundant Unit Request
- Apparatus Alert Request

The following is the message category sent to the CAD system by the FEP:

- Station Status Message
- PA Time Message
- Apparatus Alert Unsolicited Error

Alert Request

This message allows the CAD system to request a single fire station or a group of fire stations to be alerted. Upon receiving an Alert Request message, the FEP decodes the message and alerts the preferred stations. Once the alert

request message is sent to the fire stations, the FEP polls each alerted RTU for its current status. It also retrieves a complete set of data from the request. It stores the result in memory. The CAD system must poll the FEP to retrieve the RTU status, using the Station Status Request message.

Station Status Request

Upon alerting stations, the FEP automatically polls the alerted RTUs to confirm that the command was completed successfully. If the RTU did not execute the command, the FEP stores the last command failure status for the RTU in question. In addition, the RTUs report alarm information such as panic alarm, AC failure, etc., to the FEP.

Station Status Message

The station status message is sent from the FEP to the CAD in response to a CAD station status request message. The station status message contains the currently known status at the RTU.

Heartbeat Request

The Heartbeat Request is sent to confirm that there are no failures in communication from the CAD to the ACE3600.

Redundant Unit Request

In a system with redundant FEPs, this message allows the CAD system to switch between the FEPs.

Apparatus Alert Request

This message allows the CAD system to request a single apparatus or a group of apparatuses to be alerted.

Apparatuses Alert Unsolicited Error

The Apparatus Alert Unsolicited Error message is sent from the FEP to the CAD when the FEP is receiving an Apparatuses Alert Request from CAD, and has problems activating the alert, due to invalid parameters.

FSA4000 Specifications

This section provides device specifications for equipment in an FSA4000 system. See *FSA4000 System Equipment on page 35* for the minimum configuration of an operable FSA4000 system.

ACE3600 Hardware Specifications for RTU and FEP

Table 4: ACE3600 RTU Specifications

Component	Attribute
General	
Frames	<ul style="list-style-type: none"> No I/O slots – PS and CPU modules only, wall mount 117 W × 244 H × 198* D mm (4.61 in. × 8.23 in. × 7.80 in.*), 0.95 kg (2.1 Lb)
	<ul style="list-style-type: none"> 3 I/O slots – PS, CPU and up to 3 I/O modules, wall mount 234 W × 244 H × 198* D mm (9.21 in. × 9.61 in. × 7.80 in.*), approximately 1.9 kg (4.19 lb)
	<ul style="list-style-type: none"> 5 I/O slots – PS, CPU and up to 5 I/O modules, wall mount 314 W × 244 H × 198* D mm (12.36 in. × 9.61 in. × 7.80 in.*), approximately 2.4 kg (5.3 lb)

Table continued...

Component Attribute

- 7 I/O slots – PS, CPU and up to 7 I/O modules
- 391 W × 244 H × 198* D mm (15.39 in. × 9.61 in. × 7.80 in.*), 3 kg (6.6 lb)

- 8 I/O slots – PS, CPU and up to 8 I/O modules, wall mount or 19 in. rack
- 435 W × 244 H × 198* D mm (17 in. × 9.61 in. × 7.80 in.*), approximately 3.3 kg (7.3 lb)



Note: * Depth including module panel.

Metal Chassis	Large – for PS, CPU and up to 7 I/O slot frame, two radios and 6.5 or 10 Ah backup battery, wall mount, 448 × 468 mm × 200* D mm (17.64 in. × 18.43 in. × 7.88 in.*) Small – for PS, CPU and up to 3 I/O slot frame, one radio and 6.5 Ah backup battery, wall mount, 335 W × 355 H × 198* D mm (13.19" x 13.98" x 7.8")
Enclosure	Large Nema 4 /IP66 painted metal – up to 7 I/O slot frame, two radios and 6.5 or 10 Ah, backup battery, 500 W × 500 H × 210 D mm (19.7 in. × 19.7 in. × 8.26 in.) Small Nema 4 /IP66 painted metal – up to 3 I/O slot frame one radio and 6.5 Ah backup battery, 380 W × 380 H × 210 D mm (15 in. × 15 in. × 8.26 in.)
Power Supply	<ul style="list-style-type: none"> • 10.8 V to 16 V DC (default) • 18 V to 72 V DC • 18 V to 72 V DC with 12 V smart battery charger • 100 V to 240 V AC, 50 Hz to 60 Hz • 100 V to 240 V AC, 50 Hz to 60 Hz, with 12 V smart battery charger
Backup Battery	<ul style="list-style-type: none"> • 6.5 Ah – Sealed Lead-Acid • 10 Ah – Sealed Lead-Acid
Operating Temperature	<ul style="list-style-type: none"> • -40 °C to +70 °C (-40 °F to 158 °F) • Note 1: When using a metal housing option, the maximum operating temperature outside the housing is +60 °C (140 °F). • Note 2: The ACT module and Motorola radios operating temperature range is -30 °C to +60 °C (-22 °F to 140 °F).
Storage Temperature	-55 °C to +85 °C (-67 °F to 185 °F)
Operating Humidity	5% to 95% RH at 50 °C without condensation
Mechanical Vibrations	Per EIA/TIA 603 Base station, Sinusoidal 0.07 mm at 10 Hz to 30 Hz, 0.035 mm at 30 Hz to 60 Hz
Operating Altitude	<ul style="list-style-type: none"> • -400 m to +4000 m (-1312 ft to + 13120 ft) above sea level • Note: When using 18–72 VDC or 100–240 VAC power supplies, the operating altitude is -400 m to +200 m.

Regulatory Standards

Safety	<ul style="list-style-type: none"> • UL 60950-1:2001 • CSA 22.2-60950-1 • IEC 60950-1
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Table continued...

Component Attribute	
<ul style="list-style-type: none">• AS/NZS 60950	
Emission	<ul style="list-style-type: none">• Emission standards per:• CFR 47 FCC part 15, subpart B (class A)• EN55022:2003 Class A• EN61000-3-2• EN61000-3-3
Immunity	<ul style="list-style-type: none">• Immunity standards for industrial environments per EN50082-2/IEC 61000-6-2• IEC 61000-4-2• IEC 61000-4-3• IEC 61000-4-4• IEC 61000-4-5• IEC 61000-4-6• IEC 61000-4-11
Communications	
Communication Ports	<ul style="list-style-type: none">• Up to 5 ports per CPU• Serial – up to 4 × RS-232 ports• Multi-drop – up to 3 × RS-485 ports• Ethernet – up to 2 × 10/100 MB ports and 1 × 10 MB port• Two-way radio/analog trunked radio – up 2 × modem ports
Motorola Radio Support	ASTRO® 25 system digital, analog, and trunking.
Modem Support	Dial-up modems, cellular modems (dial mode PD)
Protocols	MDLC, TCP, UDP, IP, PPP, NTP, DHCP
Third-Party Protocol	MODBUS RTU (master/slave, RS-232/RS-485), DF1 (Allen Bradley – Master on RS-232)
User Protocol (in user program)	Possible on RS-232, RS-485 and Ethernet ports

ACE3600 Front End Processor Specifications

The following table shows the attributes associated with each component of the ACE3600 Front End Processor.

Table 5: ACE3600 Front End Processor Component Attributes

Component	Attribute
Microprocessor	Freescale – Power PC II MPC8720, 32-bit, extended communication capability, DMA and floating point calculation support
Microprocessor Clock	200 MHz
User Memory	<ul style="list-style-type: none">• FLASH: 3 MB

Table continued...

	<ul style="list-style-type: none"> DRAM: 10 MB Optional plug-in SRAM: 4 MB
Real-Time Clock	<ul style="list-style-type: none"> Full calendar with leap year support (year, month, day, hours, minutes, seconds, milliseconds) Time drift: max. 2.5 Seconds per day (when power is on)
SRAM and RTC Retention	Rechargeable lithium backup battery
Serial Port 1	<ul style="list-style-type: none"> Configurable RS-232 or RS485 port: RS-232: Asynch, Full Flow Control, up to 230.4 kb/s, GPS receiver interface RS485: multi-drop 2-Wire up to 460.8 kb/s
Serial Port 2	RS-232, Asynch, Full Flow Control, up to 230.4 kb/s, GPS receiver interface
Plug-In Port 1	<ul style="list-style-type: none"> Supports the following Plug-In ports: Radio Modem – DPSK 1.2 kb/s, FSK 2.4 kb/s, DFM 4.8 kb/s and Duo-binary 9.6 kb/s RS-232 – Sync/Asynch, Full Flow Control, up to 230.4 kb/s, GPS receiver interface RS485 – multi-drop 2-Wire up to 460.8 kb/s - Ethernet 10/100 Mb/s
Plug-In Port 2	<ul style="list-style-type: none"> Supports the following Plug-In ports: Radio Modem – (General Radio Interface) DPSK 1.2 kb/s, FSK 2.4 kb/s, DFM 4.8 kb/s and Duo-binary 9.6 kb/s RS-232 – Sync/Asynch, Full Flow Control, up to 230.4 kb/s, GPS receiver interface RS485 – multi-drop 2-Wire up to 460.8 kb/s - Ethernet 10 Mb/s
Ethernet Port 1	10/100 Mb/s, (on CPU 3640 only)
LEDs Display	4 CPU diagnostics LEDS, Port status LEDs and user application LEDs
Operating Voltage	10.8-16 VDC (from the motherboard connector)
Power Consumption	Max. 4.2 W (300 mA @ 14 V DC)
Dimensions	56 mm W x 225 mm H x 180 mm D (2.2" W x 8.7" H x 7.1" D)
Weight	Approx. 0.38 kg (0.84 lb)

Audio Control and Tone (ACT) Module Specifications

The following table shows the attributes associated with each component of the ACT Module.

Table 6: ACT Module Specifications

Component	Attribute
General	
Operation Voltage:	9 to 16 VDC
Power Consumption:	<ul style="list-style-type: none"> 140 mA max (when all relays are energized) 35 mA max (when all relays are non-energized)
Dimensions (H × W × L):	25 mm × 95 mm × 115 mm (1 in. × 3.6 in. × 4.5 in.)
Operating Temperature:	-30 °C to +60 °C

Table continued...

Storage Temperature:	-40 °C to +85 °C
Relative Humidity:	0% to 95% at 50 °C without condensation
User Connection	
Power connector:	Molex 2-pin with polarity
COM IN RS-232:	Phone 8-pin
COM OUT RS-232:	Phone 8-pin
Low-level:	Audio In/Out 4 screw TB connector
High-level In/Out:	Eight screw TB
Audio	
Low-level Audio Input:	0.8 to 1.5 Vp-p, 300 Hz to 3300 Hz, Minimum 50 kW ± 10% input impedance – 4.6 KV isolated
Low-level Audio Output:	1 Vp-p ± 60% – 4.6 KV isolated, through Isolation Board
High-level Audio Input:	Maximum 30 VAC RMS, 2.5 A RMS; Maximum 0.05 W-output Impedance; Minimum signal: 100 mV, 100 µA
High-level Audio Output:	30 V RMS, 0.5 A RMS maximum per one output
EMC	
Electrostatic Discharge:	IEC 1000-4-2, level 3
Radiated Electromagnetic Field:	IEC 1000-4-3, level 3
Electrical Fast Transient/Burst:	IEC 1000-4-4, level 3
Radiated Emission:	EN55022

Alerting Master Computer Specifications

Components	Attributes
Processor	Intel® Xeon® processor X3430 (2.40 GHz, 8MB cache, 95W, 1333MHz) Quad-Core
Cache	8 MB
Chipset	Intel® 3420 Chipset
Hard Drive	250GB 3G SATA 7200RPM Non-Hot Plug ETY HDD
Hard Drive Controller	Integrated 6 ports SATA controller (4 ports available for Hard Disks)
System Memory	2GB Total Memory (2x 1GB PC3-10600E)
Optical Storage Devices (CD ROM and other)	HP 16x Half-height SATA DVD-ROM Optical Drive
Network Interface Card (NIC)	1 Embedded HP NC107i Single Port Gigabit NIC
Graphics Processor/ Memory	64 MB shared supports all display resolutions up to 1600x1200 16bpp @ 75 Hz
Keyboard	HP PS/2 Standard Keyboard

Table continued...

Mouse	Microsoft Wheel Mouse Optical —3 Btn — Cable — PS/2, USB — Black
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Alerting LAN Computer (ALC) Hardware Specifications

The Alerting LAN Computer (ALC) is installed on a Z420 or Z400 workstation. This section provides the hardware specifications for each.

Z420 Workstation Specifications

The following table provides a description of each of the components of the Z420 workstation.

Table 7: Z420 Workstation Specifications

Component	Description
Processor	Intel Xeon E5-1603, 2.8 GHz, 1066 MHz memory, Quad Core
Chipset	Intel C602
Hard Drive	250 GB 7200 rpm SATA 3.0 Gb/s NCQ
Hard Disk Controller	Integrated SATA controller
System Memory	4 GB Total memory (2 x 2 GB DDR3 1600 MHz ECC)
LAN	Integrated Intel 82579LM PCIe GbE Controller
Optical Storage Devices	16X SuperMulti DVDRW SATA (CD ROM and other)
Keyboard	HP USB Standard Keyboard
Mouse	Microsoft Wheel Optical 3-button USB Mouse
Graphics Processor	NVidia Quadro NVS 310 512 MB Dual Head
Expansion Slots	<ul style="list-style-type: none"> • 2 PCI Express Gen3 x 16 mechanical/electrical • 1 PCI Express Gen3 x 8 mechanical/electrical • 1 PCI Express Gen2 x 8 mechanical/x4 electrical • 1 PCI Express Gen2 x 4 mechanical/x1 electrical • 1 Legacy PCI
Built-in I/O Ports	<ul style="list-style-type: none"> • 5 USB 2.0 • 4 USB 3.0 • 2 IEEE 1394
Power Supply	600W (90% efficient power supply)
Power Consumption	max 600W

Z400 Workstation Specifications

The following table shows the description of each component of the Z400 workstation.

Table 8: Hardware Specifications of the Z400 Workstation

Component	Description
Processor	Intel Xeon W3503 2.4 GHz 1066 MHz Dual Core

Table continued...

Chipset	Intel X58 Express
Hard Drive	160 GB 7200 rpm SATA 3.0 Gb/s NCQ
Hard Disk Controller	Integrated serial ATA controller (ICH9R) 3 Gb/s (NCQ with 5 SATA connectors) with RAID 0,1,5 and 10 capability; removable boot drive option
System Memory	3GB Total memory (3 x 1 GB DDR3 1066 MHz ECC)
LAN	10/100/1000 Mbit; Broadcom NetXtreme Gigabit Ethernet
Optical Storage Devices	16X Max SATA DVD+/-RW Drive (CD ROM, and so on)
Keyboard	HP PS/2 Standard Keyboard US
Mouse	Microsoft Wheel Optical 3-button USB Mouse
Graphics Processor	NVidia Quadro NVS 295 256MB Dual Head
Expansion Slots	<ul style="list-style-type: none"> • 2 PCIe Gen2 x 16 • 1 PCIe Gen2 x 8 mechanical (x4 electrical) • 1 PCIe Gen1 x 8 mechanical (x4 electrical) • 2 PCI (full-height/length) • 1 22-in-1 Media Card Reader (optional)
Built-in I/O Ports	USB 2.0
Power Supply	475 W (85% efficient power supply; wide ranging, Active Power Factor Correction)
Power Consumption	max 475 W

Computer Aided Dispatch (CAD) Specifications

The CAD is an optional device provided by your organization. See the user manual provided with your PC for specifications.

Chapter

2

FSA4000 Theory of Operation

This chapter explains how the equipment in the FSA4000 system functions.

FSA4000 — How it Works in a Typical Fire Station

If a distress phone call about an emergency from a particular community is received, the console operator responds immediately. The operator uses a console workstation that is equipped with the FSA4000 Dispatch Software to select the closest fire stations to that community. Next, the operator sends an alert signal to alert the first responders. The signal is sent either to a certain bunkroom or any particular zones that are within a fire station. The alert signal is composed of heart saver tones, which gradually increase in volume. The alert tone is sounded through the Public Address system to gain the attention of the first responder. A voice message follows the alert tone. Separate alert tones are used to inform the first responders of the type of alert. The operator uses FSA4000 to remotely open the fire station bay door, and to control the traffic control signal in the street outside the fire station. Then, the operator uses the same console workstation to transmit a voice message to further inform the first responders about the details of the incident.

The console operator also monitors the fire stations once the first responders are on the road. The operator can remotely activate the fire station security system, close the bay doors, and also turn off the lights and appliances. The operator remotely resets the lights and tone to prepare the fire stations for the next call.

The CAD (Computer Aided Dispatch) performs similar FSA4000 tasks for the console operator. In case an alert signal does not reach the fire stations, the console operator is notified. The operator follows the Standard Operation Procedure (SOP) to utilize an alternate method to alert the fire personnel.



Note: Fire Station Alerting behavior depends on the specific configuration established for your system. Some of the scenarios may function differently on your system installation, depending on the configuration.

FSA4000 System Configurations

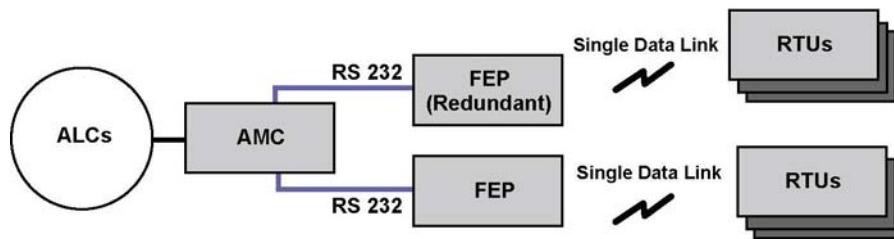
The FSA4000 can be configured in multiple ways, depending on station needs. *Figure 16: FSA4000 System Configuration – 1 AMC, 1 FEP, Single Data Link, and FEP Redundancy on page 58* to *Figure 21: FSA4000 System Configuration – two AMCs with two FEPs in Each, Dual Data Links and FEP Redundancy for Each FEP on page 59* show the available configurations.



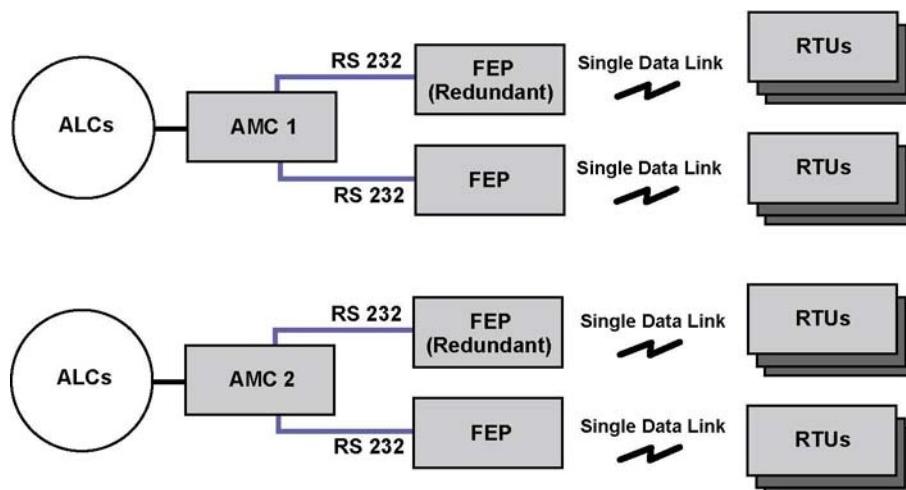
Important:

Each AMC can be connected to a maximum of three active FEPs at the same time.

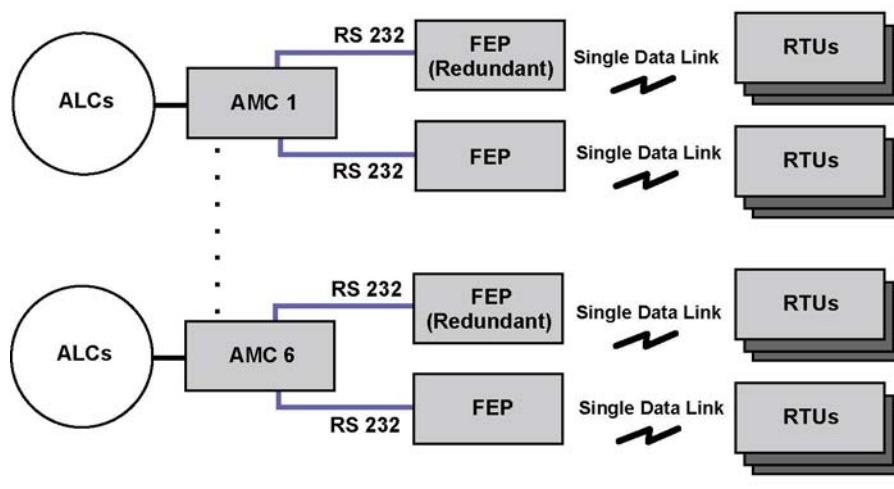
Each of the FEPs can have a redundant FEP. When FEP redundancy is implemented, **all** active FEPs must have a redundant FEP assigned to them.

Figure 16: FSA4000 System Configuration – 1 AMC, 1 FEP, Single Data Link, and FEP Redundancy

FSA_1AMC_1FEP_Redun_1Data

Figure 17: FSA4000 System Configuration – two AMCs with 1 FEP in Each, Single Data Link and FEP Redundancy for Each FEP

FSA_2AMC_1FEP_Redun_Data

Figure 18: FSA4000 System Configuration – six AMCs with 1 FEP in Each, Single Data Link and FEP Redundancy for Each FEP

FSA_6AMC_1FEP_Redun_Data

Figure 19: FSA4000 System Configuration – 1 AMC, two FEPs, Dual Data Links, and No FEP Redundancy

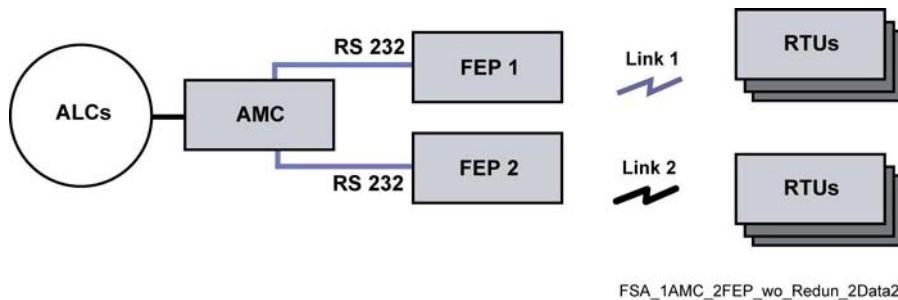


Figure 20: FSA4000 System Configuration – two AMCs with two FEPs in Each, Dual Data Links and No FEP Redundancy

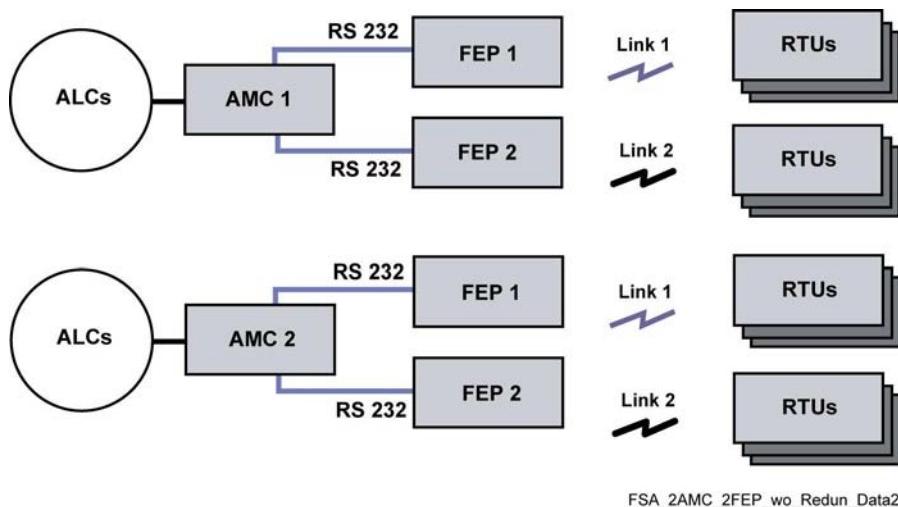
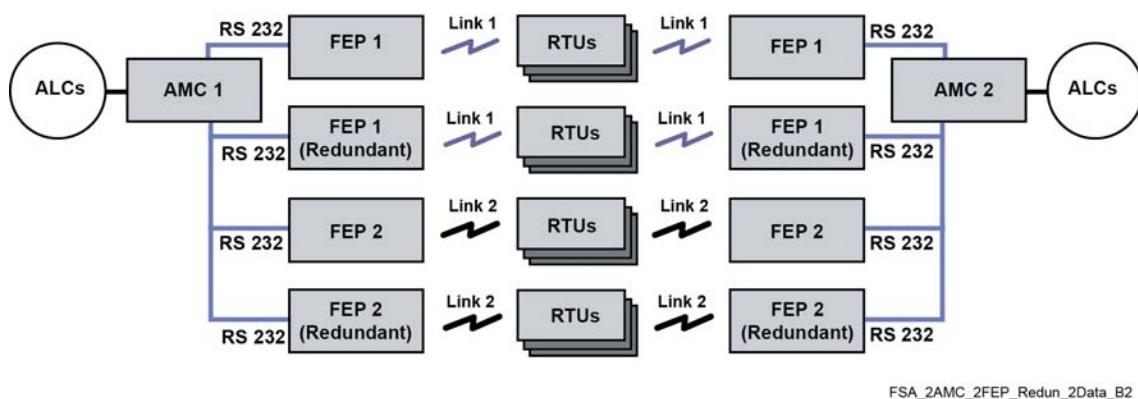


Figure 21: FSA4000 System Configuration – two AMCs with two FEPs in Each, Dual Data Links and FEP Redundancy for Each FEP



FSA4000 Infrastructure Types

There are two different infrastructure types available in an FSA4000 system: dual link infrastructure and single link infrastructure.

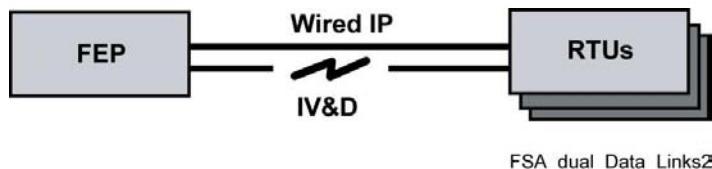
Dual Link Infrastructure

With a dual link infrastructure, FSA4000 can operate on an ASTRO® 25 Integrated Voice and Data (IV&D) systems and on an IP-based data network (wired or wireless) at each fire station. This dual link infrastructure provides increased reliability for alerts to reach their destination. The system transmits commands over both links to enable delivery of the data message (see *Figure 22: FSA4000 Infrastructure with Dual Data Links on page 60*).

Dual link functionality uses the following methods to achieve redundancy and high reliability:

- Data communication is supported over the ASTRO® 25 IVD system with one link, and over an IP-based data network (wired or wireless) with another link.
- Implements full two-way messaging with acknowledgments on both links.
- Alerting systems from the dispatch center regularly poll links at the fire stations to ensure consistent connectivity.
- Loss of any communications on either link to each fire station displays as an alarm on the dispatch alerting system terminal.
- The system sends alerts simultaneously on both links.

Figure 22: FSA4000 Infrastructure with Dual Data Links



FSA_dual_Data_Links2

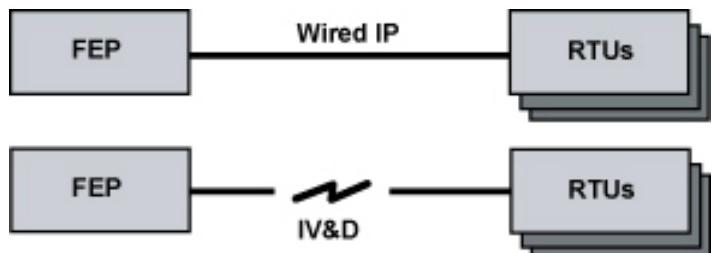
The Dual Link capability allows you to employ your own IP network next to the ASTRO® 25 IVD platform. Software applications operating on the ACE3600 Remote Terminal Units can communicate over your organizations IP network. However, the network must meet the following criteria:

- The network must support IPv4.
- The network must support Ethernet 10/100Base-T devices.
- The port on the Ethernet switch to which the ACE3600 is connected must be set for auto negotiation.
- A high traffic scenario would be an all station alert to 40 Fire Station RTUs which would utilize 8 kb per second of bandwidth.

Single Link Infrastructure

In an FSA4000 system with a single link infrastructure, communication occurs only over either an RF frequency or an IP alerting system (see *Figure 23: FSA4000 Infrastructure with Single Data Links on page 60*).

Figure 23: FSA4000 Infrastructure with Single Data Links



FSA_single_Data_Links3

FSA4000 — Fire Station Alerting System Functions

FSA4000 functions are classified into:

- Stations alerting system functions – non-zones functions with the optional Multi Group Alerting GUI
- Station zones alerting system functions – zones functions
- Station Apparatuses alerting system functions

Zoning/non-zoning allows audio and tone routing in a station. It also allows an operator to select the entire station. Alternatively, the operator can alert only the selected areas and the common zones of the station (zones 1–5). The apparatus alerting functions work in addition to both zone and non-zone layout. The Multi Group Alerting GUI can be configured only in station (non-zone) layout without apparatuses.

There are two modes of tone activation in remote stations in a multi-tone environment (that is, where each tone is associated with a specific zone):

- Common mode – one tone plays in all selected zones (plus the Common zone) for a specified time.
- Staggering mode – different tones play sequentially (per each selected zone) for a specified time, as defined in the alert sequence.

Stations Alerting (Non-Zone) System Functions

In the non-zone layout, the station is not divided into zones. The functions of the station alerting system are:

- Selecting the stations for alert
- Playing a tone based on the sequence number (selected sequence)
- Verifying the alert that was received
- Activating the alerting sequence

The FSA4000 Software **Alerting** screen on the Alerting LAN Computer (ALC) has different types of fire station selection buttons according to the non-zone layout. In a non-zoned system, the operator selects the appropriate fire station, and then the sequence needed for the alert. Sequences are not individualized per station. Therefore, Sequence 1 for Fire Station 1 is the same sequence as Sequence 1 for Fire Station 3 that are on the same FSA4000 system.

The FSA4000 Software alerting screen gives the operator a sequence selection button or buttons.



Note:

The sequence selection button option is relevant only for non-zone layout systems where more than one alerting sequence is supported.

If a default sequence has been defined, sequence selection can be skipped.

Multi Group Alerting GUI

Multi Group Alerting GUI (Graphic User Interface) is a Fire Station Alerting (FSA4000) feature which improves the usability when several dispatchers work in parallel in the same alerting center. This feature enables a dispatcher to assign fire stations to groups (2–6) and to manage the fire stations at a group level using the FSA4000 Dispatch Software. Notice that Multi Group Alerting GUI is supported only in station (non-zone) layout without apparatuses.

In a system with four groups, the user can divide each group into subgroups and assign names to them. Every subgroup is displayed as a separate column.

Multi Group Alerting GUI supports up to 127 stations assigned to groups – between 2 and 6 – according to the scheme shown in [Table 9: Stations Assigned to Groups on page 61](#).

Table 9: Stations Assigned to Groups

	2 groups	3 groups	4 groups	5 groups	6 groups
Group 1	64	48	32	24	24
Group 2	63	32	32	16	16
Group 3	N/A	47	32	24	24

Table continued...

	2 groups	3 groups	4 groups	5 groups	6 groups
Group 4	N/A	N/A	31	24	24
Group 5	N/A	N/A	N/A	39	16
Group 6	N/A	N/A	N/A	N/A	23

Station Zones – Alerting System Functions

In zone layout, each fire station in the system is divided into individual zones (up to five zones). Each of the zones might be associated with a different station function or personnel. Each zone can be alerted separately and a different audio tone can be directed to each zone. The Alert All button (the first square button) and up to five zones are shown in each station, with disabled zones in gray.

The functions of the station zones system are:

- to select the zones for alert
- to play a tone based on the zone selected (sequence 1)
- to check and verify that the alert was received
- to activate the alerting sequence

The zone layout supports up to five audio zones. An operator can choose multiple sequences per zone. For example:

- Truck
- Medic
- Engine
- Pumper



Note: In a zoned FSA4000 system, the FSA4000 Configuration Tool configures all fire stations. All of them receive the same zone setup.

The FSA4000 Dispatch Software **Alerting** screen has different types of fire station selection buttons. In the zone layout, each station button represents a specific zone. The **Alert All** button (the first square button) selects all enabled zones in the station.

The FSA4000 Software **Alerting** screen, that is based on zone layout, supports a button with a configurable sequence name (specific to the individual FSA4000 system). Use the button to send a special sequence that is pre-defined in the configuration tool. This sequence is in addition to the alerting sequence. In a zoned system, the sequence is tied to a zone, not to the individual fire stations in the FSA4000 system.



Note: The FSA4000 application displays **General Announcement** on this button as the pre-configured display. If you choose to configure the button, the display name is limited to seven characters.

Station Apparatuses – Alerting System Functions

In either layout (zone or non-zone), if the Apparatus feature is enabled, various devices or personnel can be depicted as apparatuses in the stations. The typical FSA4000 server/client system can be configured with up to 8 or up to 15 apparatuses in every fire station. The FSA4000 Aux I/O system can be configured with up to 54 apparatuses.



Note: The Apparatus feature is not available with the Multi Group Alerting GUI display.

Each apparatus has a unique name and a type, such as an ambulance or a ladder. The tone played at the fire station is determined by the apparatus type, so all ambulances have the same tone, all ladders have the same tone, and so on.

The dispatcher can easily select the appropriate apparatuses to be alerted, in response to a fire incident call. In FSA4000 client/server systems, the dispatcher can also move an apparatus between fire stations or rearrange an apparatus within a fire station. In addition, in the FSA4000 client/server systems, the dispatcher can receive a status indication of each apparatus in the system. The status includes: Equipment In Quarters, Equipment Dispatched,

Equipment Out and Available, and Equipment Out of Service. In FSA4000 Aux I/O systems, the dispatcher can see whether the apparatus is in the station.

The functions of the apparatus system are:

- Easy selection of the appropriate apparatuses to be alerted, as a response to a fire incident call.
- Ability to move apparatuses between fire stations or rearrange an apparatus within a fire station.
- Updated status indication of every apparatus in the system.

Automatic Remote Talkgroup Assignment (ARTA) feature (optional)

Automatic Remote Talkgroup Assignment is a Fire Station Alerting (FSA4000) feature enabled on MCC 7500/CENTRACOM Gold Elite Dispatch Consoles which allows multiple dispatchers to conduct simultaneous voice announcements to different groups of fire stations. This feature automatically assigns an alert talkgroup to each dispatcher, and the FSA4000 RTU in the fire station selects the needed talkgroup on the voice radio to match the dispatcher who sent the alert.

The following constraints exist with ARTA in ASTRO® 25 7.x systems:

- Only a single active FEP is supported. Optionally, the single FEP can be provided with a backup unit (redundancy)
- FSA4000 Client Software should be cohabited on consoles
- The Console dispatch software must be run in the background
- FSA4000 Dispatch Software (Alerting Master Computer/Alerting LAN Computers) is also required for an FSA4000 subsystem based on Computer Aided Dispatch (CAD) interface only.
- Day/Night mode and Battalion Chief functionality are not available.



Note: An alert talkgroup is assigned per dispatcher. Therefore, in the presence of talkgroup availability, the system may experience issues when the number of talkgroups is less than the number of the dispatch positions. Thus it is recommended that the number of talkgroups be at least equal to the number of dispatch positions.

In a dual voice alert mode, the voice radio transmits on two talkgroups so that there is not a single point of failure for the configuration of radio talkgroup. Although it is optional in the FSA4000 system, the dual voice alert mode is strongly recommended for maximum reliability.

The Day/Night mode and Battalion Chief functionality are not supported when the ARTA feature is enabled because their nature is different. ARTA is based on assigning a different talkgroup per voice call, whereas Day/Night mode and Battalion Chief functionality are both based on hearing all voice calls in the subsystem. So if the talkgroup keeps changing, no voice calls can be heard.

The FSA4000 subsystem is supported in both transmit types: General Transmit and APB Transmit (All-Points Bulletin). General transmit can be used with hardware PTTs (footswitch, microphone PTT, headset/handset PTT) while APB transmit can be used with mouse-driven PTT voice dispatch only. APB Transmit is a high priority transmit and its priority exceeds General Transmit. A console operator using a higher priority transmission can take control of a resource from another console position. So when the dual voice alert mode or the number of talkgroups exceeds the number of console positions in a busy fire station system, use one transmit type for all the console positions to avoid transmit interruption.

Radio Zone Configuration

The FSA4000 system supports both, zone and non-zone, modes of ASTRO® 25 system radio configuration. In a radio zone configuration system, the operator must define the talkgroups in the FSA4000 Configuration Tool, in the sequential order that they appear in the radio zones.



Note: The word *zone* applies here to the radio system, not the FSA4000 station zones.

FSA4000 Front End Processing (FEP)

Front-end processing (FEP) provides connectivity between the remote terminal units (RTUs) and the alerting computers – CAD, ALC and AMC, or console (for FSA4000 Aux I/O), depending on the system configuration. The FEP receives messages such as alert requests from CAD systems and sends them to the RTUs that are located at each fire station. In addition, the FEP contains a database with information about the status (active/inactive, AC power failure, and so on) of each RTU in the field.

FSA4000 utilizes FEPs that support the following functions::

- **CAD Interface:** The FEP supports the option to add a serial RS-232 to a CAD system.
- **CAD Interface – Text Transmission:** FSA supports wireless text messaging operations. Pre-formatted or free format text and numeric information are sent from the CAD system directly to a printer that is located at each fire station. This data includes standard information such as address, landmarks, fire hydrant locations, and potential hazardous materials. A maximum of 500 characters of ASCII text information is transmitted to the fire station printers.
- **InTouch Interface:** The FEP communicates with the FSA4000 Software that runs on Alerting Master Computers and Alerting LAN Computers. It supplies the operator with a convenient interface to all relevant Fire Stations.
- **Redundant FEP Operation:** FEP redundancy means doubling the number of FEP CPUs in the system by adding a back-up FEP CPU for each FEP in the system. Thus, enables the definition of a backup CPU for each defined FEP.
- **Local Programming and Diagnostics Interface:** The FEP supports a local RS-232 port for programming and diagnostics of the RTU network. Diagnostic software is available through the ACE3600 System Tools Suite applications.
- **Dual Links:** Each FEP supports up to two communication links to the RTU.
- **Dual Redundant FEPs:** An FSA4000 system can have up to two communication links per FEP, with multiple FEPs in the system.
- **Remote Apparatuses Alerting:** Each fire station contains different numbers of apparatuses. The tone played at the fire station is determined by the required apparatus type (for example, an ambulance or a ladder).
- **Automatic Remote Talkgroup Assignment (ARTA):** The FEP supports the option of allocated automatic talkgroup assignment which allows multiple dispatchers to conduct simultaneous voice announcements to different groups of fire stations as it automatically assigns an alert talk group to each dispatcher, and the FSA4000 RTU in the fire station selects the needed talkgroup on the voice radio to match the dispatcher who sent the alert.

FSA4000 — Front End Processing System Layout

The FEP system is an interface between RTU communications and the alerting computers (CAD, AMC, ALC, and console).

Different types of FEP system layout are:

- **Single FEP:** A single FEP system supports a connection to the AMC and CAD, and to the RTU through IP connectivity.
- **Redundant FEP:** The redundant FEP system has two separate CPU units for two available RS-232 connections back to the server. Therefore, if one connection fails, the other CPU can take over for communication to the AMC. If communications to the primary FEP fail, you switch to the backup FEP manually.
- **Multiple Redundant FEPs:** An FSA4000 system can have up to six sets of redundant FEPs, for a total of 12 FEPs per system.



Note: The redundant FEP and multiple redundant FEP layouts are not supported in the FSA4000 Aux I/O configuration.

Front End Processing Alerting Features

The FSA4000 allows the operator to proceed with the voice alert immediately after the fire stations receive the transmission. In the case where the alerting system initiates a signaling tone before a voice alert, the voice alerting commences after the signaling tone is complete. The system starts a poll within a second after the command has been sent. The polling confirms whether the command sent to the station or stations was successful. If a station did not receive the alert transmission, a `last command fail` status message is displayed on the alerting screen.

The following are the FEP alerts:

- **Remote station alerting:** The FEP supports remote station alerting to all relevant stations and zones.
- **Last command failure:** Following an alert, the FEP supports “last command failure” indication in case a remote fire station did not receive the alert.
- **Communication status for alerted stations:** Following an alert, the FEP supports the communication status failure indication with each of the alerted fire stations.
- **Enable/Disable Communication link to remote stations:** The FEP supports the option of enabling/disabling each communication link per each supported remote station. Enabling/Disabling Communication link is performed through one of the FEP interfaces.
- **Stop Alerting sequence:** An option on the FSA4000 Dispatch Software GUI that allows the operator to stop the alerting sequence (communication to the stations).
- **Stop PA in a sequence:** An option on the FSA4000 Dispatch Software GUI that allows the operator to stop the PA of an alerting sequence (communication to the stations).
- **Multiple dispatch applications:** The FEP supports up to 40 dispatching PC applications through the FSA4000 Dispatch Software GUI.



Note: A PC dispatching application can be CAD, InTouch, or both on the same dispatch location.

- **CAD-InTouch synchronization:** If the CAD alerts an FSA remote station, the FEP informs all FSA4000 Dispatch Software applications about this activity.
- **Exact PA time calculation support:** FEP calculates and stores in run time the updated remaining “PA open” time in the remote stations, according to the alert sequence. This calculation is accurate even if tone staggering is implemented (different zones from station to station are alerted simultaneously).
- **Dynamic PA time scaling:** The FEP scales the “PA open” time for stations that have fewer alerted zones than others. The scaling prevents the PA from closing too early. The FEP waits to receive the entire voice message from the operator.
- **Formatted text message transfer:** The FEP supports formatted text message transferring to remote stations. Maximum supported length of text is 500 bytes.
- **Unformatted text message transfer:** The FEP supports unformatted text message transferring to remote stations. Maximum supported length of text is 500 bytes.
- **Battalion Chief feature support:** If this feature is enabled, the FEP can recognize the battalion chief location. It is possible due to manual digital input (DI) operated by the Battalion Chief when entering the station. The FEP also alerts its station and zone for every alert in the system. The battalion chief feature is pre-configured in the FSA4000 Configuration Tool.
- **Apparatus assignment and status:** The FEP enables moving apparatuses between fire stations or rearranging them within a fire station. The FEP allows the operator to receive an updated status of each apparatus in the system.
- **Printer Aux I/O interface:** The FEP logs any alert, station alarm, event, and system activity to the Aux I/O optional printer.
- **Mapping FEP I/Os:** In FSA4000 Aux I/O systems, the FEP allows mapping its DIs (Digital Inputs) to zones, apparatuses, sequences, and stations, and to assign its DOs (Outputs) to alarms, events, and indicators.
- **Automatic Remote Talkgroup Assignment (ARTA):** If this feature is enabled, the FEP allocates a dedicated talkgroup for each alert.

Chapter

3

FSA4000 Installation

This chapter details installation procedures relating to Fire Station Alerting (FSA4000).

FSA4000 System Installation

FSA4000 is deployed over the ACE3640 CPU hardware platform.

Installing All Devices in an FSA4000 System

When and where to use:

Follow the process below to install all devices in an FSA4000 system.

Process:

- 1 Install the AMC and connect it to the RNI or CEN through the LAN connection. (optional).
- 2 Install the ALC and connect it to the RNI through the LAN connection (optional).
- 3 Connect the printer to the AMC (optional).
- 4 Connect the port expansion unit to the optical cable, and connect the optical cable to the optical line driver (optional).
- 5 Connect the optical line driver to the FEP (optional), using an adapter and a cable.
- 6 Install the FEP and connect it to the CEN. For a dual link system, connect the second IP connection to your organizations IP network (optional).
- 7 Hook up the power supply on the FEP.
- 8 Install the RTU.



Note: RTUs must be configured locally, before remotely connecting to the FEP.

- 9 Connect the ACT module to the RTU.

- 10 Perform the following actions:

- a) Connect the data radio and an optional voice radio to the RTU.
- b) In a dual link system, connect the IP connection at the RTU to your organizations IP network.



Note: Optional voice radio connects to the ACT module inside the RTU.

- 11 Perform the following actions:

- a) Connect the batteries to the RTU.
- b) Connect the power to the RTU.

- 12 Connect the speakers to the ACT module on the RTU chassis.

- 13 Wire the DI and DOs on the RTU to the terminal block, according to your system configuration.

- 14 Install the software. See the appropriate software installation process for more information.

- *Installing AMCs on page 71*
- *Installing ALCs on page 127*
- *Installing the FSA4000 Client Software to Coexist on a Console on page 129*
- *Installing and Configuring FSA4000 Aux I/O on page 131*

15 Test the ACT module. See *Testing the ACT Module on page 130*.

FSA4000 Hardware Installation

This section gives basic installation information for each device located at an FSA4000 location. For detailed installation information for each device, see the individual device manuals that came with your system.

ACE3600 RTU Installation

The ACE3600 is available in various structures:

- Frame, which can accommodate a varied number and type of modules
- Metal chassis, which accommodates the frame, optional radios, backup battery, and communication interfaces
- Protective housing, which accommodates the frame, optional radios, backup battery, and communication interfaces (suitable for outdoor installation)

The ACE3600 frame consists of the following elements:

- Plastic slots which accommodate the power supply, CPU and I/O modules, and backplane bus motherboard
- Mounting plate for attaching the plastic slots together and mounting the frame on a wall
- Backplane bus motherboard which, connects the modules to each other through the signal buses and connects the modules with operating voltages
- Power junction box for AC or DC power source and ground connections

The ACE3600 RTU is shipped from the factory with the modules and plug-in ports assembled. The RTU frame is ready for mounting directly on a wall or in an enclosure. The 8 I/O slots frame and the 8 I/O (19") metal chassis can be installed on 19" racks. Use the 19" rack brackets for 8 I/O slots frame.



Note: For specific installation instructions, refer to the *ACE3600 RTU Owner's Manual*.

Mounting the ACE3600 RTU on a Wall

For convenient installation of the ACE3600 RTU on a wall, allow an additional space. Leave 6 cm (2.4") (in W, H) and 7 cm (2.75") (in D) around the plate. Four holes are provided, one in each corner of the RTU metal chassis, for wall mounting the RTU.



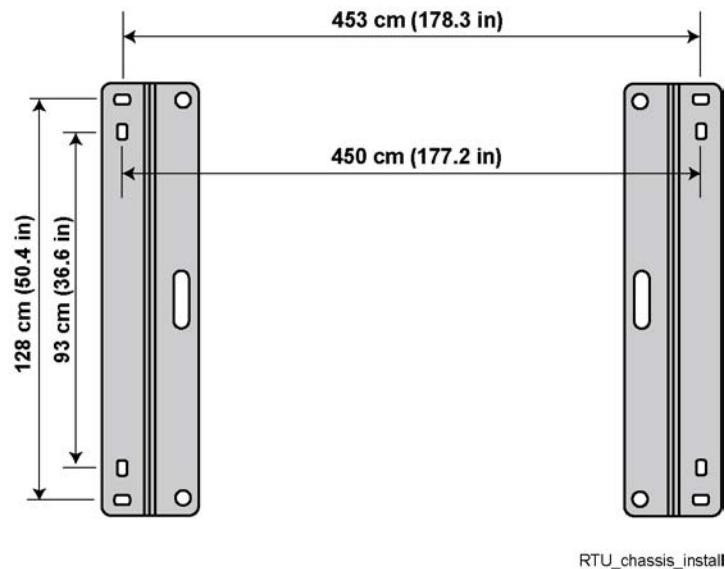
Warning: Before drilling holes for mounting the frame, make sure that there are no electrical wires installed inside the wall at the location of the holes.



Caution: If the ACE3600 is subject to high levels of shock or vibration, take suitable measures to reduce the acceleration or amplitude. Install the ACE3600 on vibration-damping materials (for example, rubber-metal anti-vibration mountings).

You can install the eight I/O slots frame and the eight I/O (19") metal chassis on a wall. Use two brackets that are shipped with the RTU. *Figure 24: ACE3600 RTU Metal Chassis Installation Dimensions on page 69* shows the required dimensions for installation.

Figure 24: ACE3600 RTU Metal Chassis Installation Dimensions



Installing the ACE3600 RTU in a 19" Rack

The 8 I/O slot frame and the 8 I/O (19") metal chassis can be installed on 19" racks. Use the 19" rack brackets for 8 I/O slots frame. See the *ACE3600 RTU Owner's Manual* for illustrations of the rack and frame mounting assembly.

ACT Module Installation

The ACT module is located in the ACE3600 RTU chassis. This section provides information on installing the module in the RTU chassis and wiring the module to the FSA4000 system.



Note: For detailed ACT module installation procedures, see the *FSA4000 Audio Control Tone (ACT) Module Owner's Manual*.

Mounting the ACT Module on the ACE3600 RTU Chassis

The Audio Control and Tone (ACT) module can be mounted in the ACE3600 on the 19" accessories metal chassis, in a small/large metal chassis, or in a small/large NEMA housing.

To connect the ACT module to the metal plate in the ACE3600 RTU, place the plastic box on the metal plate and click into the holes. See the *FSA4000 Audio Control Tone (ACT) Module Owner's Manual* for illustrations of the rack and frame mounting assembly.

ACT Module Wiring in an FSA4000 System

Typical wiring of the ACT is shown in the *FSA4000 Audio Control Tone (ACT) Module Owner's Manual*.



Note: The wiring of an ACT module may vary per system.

ACE3600 FEP Installation

The FEP is a CPU within an ACE3600 RTU. The CPU is a removable module located in a dedicated slot in the RTU rack. To install the FEP, plug the module into the wide slot to the right of the power supply module.



Note: Inserting the module in the wrong slot does not damage the CPU.

FEP I/O Installation (FSA4000 Aux I/O)

In order to connect the FEP DIs to the right relays of the console, it is recommended to use the system report printout of the FSA4000 Configuration Tool, which details the functionality of the various DIs and DOs of the FEP.

Printer Installation

Follow the installation instructions that came with your printer.



Note: The IP connection to the printer must be on the same subnet as the server and clients that use it.

FSA4000 Software Installation

This section contains software installation instructions for various FSA4000 components.

FSA4000 Software Requirements

FSA4000 supports the following operating systems:

- Microsoft Windows Server 2008 R2 Standard Edition (x64) SP1
- Microsoft Windows Server 2003 Standard Edition R2 (32-bit) with Service Pack 2
- Microsoft Windows Vista Business edition (32-bit) with Service Pack 2
- Windows 7 Professional SP1 64-bit



Note: The version numbers of the applications are described in the installation process as X.YY.

Application Versions

The following table shows the version for each application.

Table 10: Application Versions

Deliverable (Application)	Version (X.YY Attribute)
Windows Operating System Configuration for AMC and ALC	1.1.z.w
Clean Up Synnex Image	1.1.z.w
FSA4000 Users and Groups	1.50
FSA4000 Core Application	3.50
FSA4000 Configuration Tool	3.50
FSA4000 Configuration Tool - InTouch ALC Client License	3.50
FSA4000 Configuration Tool - InTouch AMC Server License	3.50
FSA4000 Configuration Tool - CAD Interface Plug-In/License	3.50
FSA4000 Configuration Tool - Redundant/Dual FEP Option License	3.50
FSA4000 Configuration Tool - Apparatus License	3.50
FSA4000 Configuration Tool - Aux I/O License	3.50

Table continued...

Deliverable (Application)	Version (X.YY Attribute)
FSA4000 Configuration Tool - ARTA License	3.50
FSA4000 Configuration Tool - Upgrade	3.50
FSA4000 Report Generator	4.50
FSA4000 Dispatch Software	3.50
ACE3600 System Tools Suite	13.60 with SP2
FSA4000 FEP Firmware	13.00
FSA4000 RTU Firmware	13.00
ACT Module Firmware	1.00
InTouch Configuration	3.50
SQL Server Configuration	3.50
Wonderware ModbusSerial DAServer	2.5 with SP2
Wonderware DAServer Runtime Components	3.0 SP1
Microsoft SQL Server Standard Edition	2005 SP3
Wonderware InTouch	10.1.300 with HotFixes 2294 and 2292
Wonderware SCADAlarm	6.0.200

Installing AMCs

When and where to use:

Follow the process below to install Alerting Master Computers (AMC).



Note: The logon username used in the AMC installation process is motosec, or Administrator (if motosec is not yet defined).

Process:

- 1 Install the operating system using MOSI. See [Installing Windows Server Using MOSI on page 74](#).
 - If the system uses the Windows Server 2008 operating system, install Windows Server 2008 R2 Standard Edition (x64) SP1.
 - If the system uses the Windows Server 2008 operating system, install Windows Server 2003 R2 Standard Edition with SP2.
- 2 Configure the Windows operating system. See [Configuring the Windows Operating System on page 77](#).
- 3 Install the external modem drivers. See [Installing External Modem Drivers on page 75](#).
- 4 Install the Digi EdgePort USB driver:
 - For Windows Server 2003, see [Installing the Digi EdgePort USB Driver On Windows Server 2003 on page 75](#).
 - For Windows Server 2008, see [Installing the Digi EdgePort USB Driver On Windows Server 2008 on page 76](#).
- 5 Install the Port Expansion Unit USB serial hub driver. See [Installing the Port Expansion Unit USB Serial Hub Driver on page 79](#).



Note: This procedure is for a Windows Server 2003 R2-based AMC which is upgraded to ASTRO® 25 7.11 (on same hardware or new hardware); or for Disaster Recovery of an AMC which was upgraded to ASTRO® 25 7.11, and remained with Windows Server 2003 R2 OS.

- 6 Install Microsoft SQL Server 2005 Standard Edition with Service Pack 4. See [Installing Microsoft SQL Server 2005 Standard Edition on page 80](#).
- 7 Install the Wonderware ModbusSerial DAServer. See [Installing the Wonderware ModbusSerial DAServer on page 81](#).
- 8 Install the Wonderware DAServer Runtime components upgrade. See [Installing the Wonderware DAServer Runtime Components Upgrade on page 82](#).
- 9 Install Wonderware InTouch. See [Installing Wonderware InTouch on page 84](#).
- 10 Install the Wonderware InTouch license file. See [Installing the Wonderware InTouch License on page 85](#).
- 11 Install Wonderware SCADAlarm. See [Installing Wonderware SCADAlarm on page 86](#).
- 12 Install the Wonderware SCADAlarm Patch. See [Installing the Wonderware SCADAlarm Patch on page 87](#).
- 13 Install the Wonderware SCADAlarm license file. See [Installing the Wonderware SCADAlarm License File](#).
- 14 Configure the Wonderware InTouch Alarm DB Logger. See [Configuring the Wonderware InTouch Alarm DB Logger on page 88](#).
- 15 Install the FSA4000 users and groups. See [Installing FSA4000 Users and Groups on page 90](#).
- 16 Install the InTouch configuration. See [Installing the InTouch Configuration on page 91](#).
- 17 Install the FSA4000 Dispatch Software. See [Installing the FSA4000 Dispatch Software Application on page 93](#).
- 18 Configure the Wonderware ModbusSerial DAServer for FSA4000 Dispatch Software. See [Configuring the Wonderware ModbusSerial DAServer for FSA4000 Dispatch Software on page 94](#).
- 19 Install the SQL Server 2005 Configuration. See [Installing SQL Server 2005 Configuration on page 95](#).
- 20 Install the FSA4000 Report Generator. See [Installing the FSA4000 Report Generator on page 96](#).
- 21 Install the ACE3600 System Tools Suite (STS) version 10.50. See [Installing ACE3600 System Tools Suite \(STS\) 10.50 on page 97](#).
- 22 Install the FSA4000 Configuration Tool. See [Installing the FSA4000 Configuration Tool on page 98](#).
- 23 Install the FSA4000 Configuration Tool InTouch AMC server license. See [Installing the FSA4000 Configuration Tool InTouch AMC Server License on page 99](#).
- 24 Install the FSA4000 Configuration Tool InTouch ALC client license. See [Installing the FSA4000 Configuration Tool InTouch ALC Client License on page 99](#).
- 25 Install the FSA4000 Configuration Tool CAD interface license. See [Installing the FSA4000 Configuration Tool CAD Interface License on page 100](#).
- 26 Install the FSA4000 Configuration Tool Redundant/Dual FEP license. See [Installing the FSA4000 Configuration Tool Redundant/Dual FEP Option License on page 101](#).
- 27 Install the FSA4000 Configuration Tool Apparatus License. See [Installing the FSA4000 Configuration Tool Apparatus License on page 102](#).
- 28 Install the FSA4000 Configuration Tool ARTA License. See [Installing the FSA4000 Configuration Tool ARTA License on page 103](#).
- 29 Uninstall the ACE3600 System Tools Suite (STS). See [Uninstalling the ACE3600 System Tools Suite \(STS\) on page 104](#).
- 30 Install the ACE3600 System Tools Suite (STS). See [Installing the ACE3600 System Tools Suite \(STS\) on page 105](#).
- 31 Install the ACE3600 System Tools Suite Service Pack. See [Installing the ACE3600 System Tools Suite Service Pack on page 105](#).
- 32 Install the FSA4000 Configuration Tool Upgrade. See [Installing the FSA4000 Configuration Tool Upgrade on page 106](#).
- 33 Remove old FSA4000 Configuration Tool components. See [Removing Old FSA4000 Configuration Tool Components on page 107](#).
- 34 Install the FSA4000 Core Applications. See [Installing FSA4000 Core Applications on page 108](#).

35 Install the Event Logging Client using the Windows Install Framework application. Refer to the *Centralized Event Logging* manual.

- This procedure is not applicable for K-core systems.

36 For Dynamic System Resilience systems or when ZCP exists, configure the Windows Event Logging Client. Refer to the “Configuring Windows Event Logging Clients” section of the *Centralized Event Logging* manual.

37 If the operating system is Windows Server 2008, perform the following tasks from the *SNMPv3* manual.

- 1 “Installing the SNMPv3 configuration utility for Windows.”
- 2 “Installing the SNMPv3 services software.”
- 3 “Installing the SNMPv3 common agent software.”
- 4 “Configuring the SNMPv3 agents.”



Note: SNMPv3 Common Agent is supported only on Windows Server 2008 R2 for replacement of IP ping with SNMP get.

38 Install Adobe Reader by following the instructions provided with the ASTRO® 25 system documentation media. Your system must have Adobe® Reader® and a web browser installed to access the documentation.



Note: For instructions to remove any previous instances of Adobe Reader, if necessary, see [Uninstalling Adobe Reader on page 109](#).

39 If the operating system is Windows Server 2003, install Remote Desktop updates. See the “Applying Remote Desktop Updates for Windows XP, Windows Server 2003, and Windows Vista” section in the *Windows Supplemental Configuration* manual.

40 If the operating system is Windows Server 2003, start NetMeeting. See the “Starting NetMeeting on Windows Server 2003 and Windows XP SP1-2” section of the *Windows Supplemental Configuration* manual.

41 Set the boot order (IA organizations only). Refer to the “Setting the Boot Order for Windows Devices (Not for Virtual Machines)” section in the *Windows Supplemental Configuration* manual.

42 Install MOTOPATCH. See [Installing Patches from the MOTOPATCH for Windows OS CD on page 109](#).



Note:

This requirement does not apply to K-core systems.

Make sure all MOTOPATCH CDs are included, for:

- Operating system software
- SP1 upgrade CD for Windows Server 2008
- Third-party applications

OS patching must be performed after patching third-party applications.

43 Install MOTODST locally. See [Installing MOTODST Locally on page 111](#).

44 Install the Windows operating system configuration. Refer to “Applying Device-Specific Settings Using the Windows Supplemental CD” in the *Windows Supplemental Configuration* manual.



Note: The procedure is obligatory for K-core systems. For all other systems, you may decide NOT to perform this procedure to avoid the lengthy reboot time. However, it must be acceptable within your organizations policy to rely on the configuration being provided by Group Policy Objects on the domain controllers.

45 For Windows Server 2008, change the default Windows logon banner locally to customize it for your organization. Refer to “Changing Logon Banners Locally” in the *Windows Supplemental Configuration* manual.

46 Create the FSA4000 Configuration Tool projects. See the *FSA4000 Configuration Tool User Guide*.

47 Configure the InTouch Alarm Printing option. See [Configuring the InTouch Alarm Printing Option on page 112](#).

48 Re-configure the Wonderware InTouch Alarm DB Logger. See [Re-Configuring Wonderware InTouch Alarm DB Logger on page 116](#).

49 Configure the MDLC formatted buffer size for the FSA4000 Configuration Tool. See [Configuring the MDLC Formatted Buffer Size for the FSA4000 Configuration Tool on page 117](#).

- 50 Configure the FSA4000 Alerting Center computers. See [Configuring the FSA4000 Alerting Center Computers on page 118](#).
- 51 Configure the FSA4000 apparatuses. See [Configuring the FSA4000 Apparatuses on page 118](#).
- 52 If your system is equipped for the optional FSA4000 Auto Remote Talkgroup Assignment (ARTA) feature, configure this feature. See [Configuring the FSA4000 Auto Remote Talkgroup Assignment \(ARTA\) on page 119](#).
- 53 Configure talkgroups for data radios. Use the CPS (Customer Programming Software) to program the talkgroups in the subscriber radios.
 - This configuration must be performed locally, in the fire station where the equipment is located.
 - Perform this procedure only for FSA4000 ARTA expansion.
- 54 Configure server redundancy. Refer to the *FSA4000 Configuration Tool User Guide*.
- 55 Create the CSV file. See [Creating the CSV File on page 120](#).
- 56 Load the FSA4000 InTouch database. See [Loading the FSA4000 InTouch Database on page 121](#).
- 57 Configure the MDLC formatted buffer size for STS. See [Configuring the MDLC Formatted Buffer Size for the ACE3600 STS on page 122](#).
- 58 Install the FSA4000 RTUs. See the *ACE3600 RTU Owner's Manual*.
- 59 Install the FSA4000 Redundant FEP (if it exists) or the Main FEP (if the Redundant FEP does not exist). See the *ACE3600 RTU Owner's Manual*.
- 60 For FSA4000 Apparatuses, configure the ACT modules. See the *FSA4000 Audio Control Tone (ACT) Module Owners Manual*.
- 61 In K-core systems with the Windows Server 2008 operating system, configure the local hosts file. See [Configuring the Local Hosts File on page 124](#).
- 62 In K-core systems with the Windows Server 2008 operating system, configure NTP. See [Configuring Network Time Protocol \(NTP\) on page 125](#).
- 63 Install Centralized Authentication. Refer to “Joining and Rejoining a Windows-Based Device to an Active Directory Domain Using a Script” in the *Authentication Services* manual.
 - This step does not apply to K-core systems.
- 64 For Windows Server 2003 systems, perform the “Removing Local Accounts from Windows XP and Windows Server 2003 Devices” procedure in the *Authentication Services* manual.
 - This step does not apply to K-core systems.
- 65 Start the FSA4000 Dispatch Software. See [Starting the FSA4000 Dispatch Software on page 126](#).
- 66 If the Redundant FSA4000 FEP option is enabled, switch the AMC to the redundant FSA4000 FEP. See [Switching the AMC to the Redundant FSA4000 FEP on page 126](#).

 **Note:** Perform this procedure to upgrade/install FSA4000 Main FEP only when the Redundant FSA4000 FEP option is used.
- 67 Upgrade the ALCs and FSA4000 Client software that cohabitantes on consoles. See [Installing ALCs on page 127](#) and [Installing the FSA4000 Client Software to Coexist on a Console on page 129](#).
- 68 If the Redundant FSA4000 FEP option is enabled, upgrade the FSA4000 Main FEP. See the *ACE3600 RTU Owner's Manual*.
- 69 If the Redundant FSA4000 FEP option is enabled, switch the AMC to the Main FSA4000 FEP. [Switching the AMC to the Main FSA4000 FEP on page 126](#)

 **Note:** Perform this procedure after upgrading/installing FSA4000 Main FEP when the Redundant FSA4000 FEP option is used.

Installing Windows Server Using MOSI

To install the Windows Operating System, use the Motorola Operating System Installer media that came with your system (see [FSA4000 Software Requirements on page 70](#)) or use an updated version of this installation media if

appropriate. The MOSI media supports Windows OS installation and configuration (local or over-the-network) by minimizing the amount of wait time normally experienced during installation. The MOSI media is updated periodically to provide continual support for installation. Information on using MOSI for installation is available on the Motorola Online (MOL) web portal. See the MOSI media label or `readme.txt` for information regarding access to Motorola Online (MOL).

Installing External Modem Drivers

When and where to use: Follow the procedure below to install external modem drivers.



Note:

- This procedure is for FSA4000 Alarm Paging option organizations only.
- While performing this procedure, you need to be logged on locally to the AMC as administrator.

Procedure:

- 1 Insert the *FSA4000 Configuration Application S/W* or *FSA4000 Configuration Application S/W Upgrade* media into the optical drive.



Note:

- Before running this script, the external modem should be connected to the AMC.
- If the media does not open automatically, you can navigate to the root directory of the optical drive and double-click **AutoStart.exe**. If one or more security dialog boxes appear, for each dialog box, click **Yes**, or **Run**, or **OK**.

Step result: The installation home page appears.

- 2 Click the **HP ProLiant ML110 G5/G6 Drivers** link.
- 3 Depending on your operating system, click either the disc icon next to the **External Modem Driver for Win2003** or the **External Modem Driver for Win2008** entry.



Note: If one or more security dialog boxes appear, for each dialog box, click **Yes**, or **Run**, or **OK**.

- 4 In the **Windows Install Framework** window, select **File → Execute installation**.

Step result: The **WIF execution log** window appears. No user intervention is required until the installation is finished.

- 5 Click **OK**.

Step result: The **OK** button is disabled until the installation is finished. The **WIF execution log** window closes.

- 6 Select **File → Exit**.

Step result: The **Windows Install Framework** window closes.

Installing the Digi EdgePort USB Driver On Windows Server 2003

When and where to use: Follow the procedure below to install the Digi EdgePort USB driver on a Windows Server 2003 R2-based AMC which is an add-on in an upgraded system only.



Note: While performing this procedure, you need to be logged on locally to the AMC as motosec, or Administrator (if motosec is not yet defined).

Procedure:

- 1 Insert the *FSA4000 Configuration Application S/W* or *FSA4000 Configuration Application S/W Upgrade* media into the optical drive.



Note: If the media does not open automatically, you can navigate to the root directory of the optical drive and double-click **AutoStart.exe**. If one or more security dialog boxes appear, for each dialog box, click **Yes**, or **Run**, or **OK**. If the Active Content Warning dialog box appears, click **Yes** or **Continue**.

Step result: The installation home page appears.

- 2 Connect the EdgePort device cable to the USB port.

Step result: The **Found New Hardware Wizard** appears, asking if Windows can connect to Windows Update to search for software.

- 3 Select **No, not this time**, and click **Next**.

Step result: The **Found New Hardware Wizard** appears, asking what you want the wizard to do.

- 4 Select **Install from a list or specific location (Advanced)**, and click **Next**.

Step result: The **Please choose your search and installation options** screen appears.

- 5 Do the following

- a) Select **Search for the best driver in these locations**.
- b) Check the **Search removable media (floppy, CD-ROM ...)** checkbox.
- c) Make sure **Include this location in the search** is unchecked. Click **Next**.

- 6 In the **Completing the Found New Hardware Wizard** screen, click **Finish**.

- 7 Click **Next**.

- 8 Click **Finish**.

Step result: After a few seconds, the **Found New Hardware Wizard** appears, asking if Windows can connect to Windows Update to search for software.

- 9 Repeat this procedure.

Step result: After the driver installation is finished, your new hardware is installed and a **ready to use** message appears in the system tray.

Installing the Digi EdgePort USB Driver On Windows Server 2008

When and where to use:

Follow the procedure below to install the Digi EdgePort USB driver on a Windows Server 2008 R2-based AMC only.



Note: While performing this procedure, you need to be logged on locally to the AMC as motosec, or Administrator (if motosec is not yet defined).



Note: The User Account Control dialog box may appear. If required, type the administrator user name and password. Click **Continue**, or **Allow**, or **OK**, or **Yes** to continue. Use the username you logged on with as the administrator user name.

Procedure:

- 1 Insert the *FSA4000 Configuration Application S/W* or *FSA4000 Configuration Application S/W Upgrade* media into the optical drive.



Note: If the media does not open automatically, you can navigate to the root directory of the optical drive and double-click **AutoStart.exe**. If one or more security dialog boxes appear, for each dialog box, click **Yes**, or **Run**, or **OK**. If the Active Content Warning dialog box appears, click **Yes** or **Continue**.

Step result: The installation home page appears.

- 2 Connect the Edgeport device cable to the USB port.

Step result: A message appears in the system tray saying that the device driver software was not successfully installed.

- 3 Select **Start → Control Panel → Hardware**.

- 4 In the **Hardware** window, click **Device Manager** in the **Devices and Printers** category.

- 5 In the **Device Manager** window, right-click on the **Unknown device** entry, in the **Other devices** category.
- 6 Select **Update driver software...** from the pop-up menu.
- 7 In the **Update Driver Software** window, click **Browse my computer for driver software**.
- 8 In the **Browse for driver software on your computer screen** window, perform the following actions:
 - a) Check the **Include subfolders** checkbox.
 - b) Click **Browse...**, navigate to DVD Drive (E:), and click **OK**.
 - c) Click **Next**.
- 9 In the **Windows has successfully updated your driver software** screen, click **Close**.



Note: Ignore any system tray messages.

- Step result:** The **Update Driver Software** window closes.
- 10 Under the **Other devices** category, right-click on the **Edgeport Serial Port_1** first entry and select **Update driver software...**
 - 11 In the **Update Driver Software** window, click **Browse my computer for driver software**. Click **Next**.
 - 12 In the **Browse for driver software** window, click **Next**.
 - 13 When the **Windows has successfully updated your driver software** screen appears, click **Close**.
 - 14 In the Device Manager, select **Action → Scan for hardware changes**.

Step result: A message appears in the system tray the drivers are being installed and your device is ready to use.

Configuring the Windows Operating System

When and where to use:

Follow the procedure below to properly configure the Windows operating system.

The OS configuration script performs the following actions:

- Installation of .NET Framework 3.5 with SP1
- Display driver update
- OS settings configuration (e.g. DNS)



Note: While performing this procedure, you need to be logged on locally to the AMC as motosec or Administrator (if motosec is not yet defined), or to the ALC as secmoto or User-Adm (if secmoto is not yet defined).

Procedure:

- 1 Close all running applications and all property settings, or any other open windows and dialog boxes.
- 2  **Important:** Running applications or open windows and dialog boxes may cause the configuration script to fail to configure Windows properly.
- 2 Insert the *FSA4000 Configuration Application S/W* or *FSA4000 Configuration Application S/W Upgrade* media into the optical drive.

**Note:**

If the media does not open automatically, you can navigate to the root directory of the optical drive and double-click **AutoStart.exe**. If one or more security dialog boxes appear, for each dialog box click **Yes**, or **Run**, or **OK**.

If the **Active Content Warning** dialog box appears, click **Yes**, or **Continue**.

Before running the script, the network cable should be plugged in.

If the Set Up Windows Internet Explorer 8 wizard appears, click **Ask me Later** to continue.

If the **Content from the website listed below is being blocked** dialog box appears, click **Close**, and then close the **Internet Explorer cannot display the webpage** tab, to continue.

- 3 When the installation home page appears, click the **FSA4000 Windows Settings** link, and then click the disc icon next to the **Windows Operating System Configuration for AMC and ALC** entry.



Note: If one or more security dialog boxes appear, for each dialog box, click **Yes**, or **Run**, or **OK**.

Step result: The **Windows Install Framework** window appears.

- 4 Determine if the network is already configured:
 - a) Open a command window. For example, press the **Windows icon key + R** to open the Run dialog box, then enter `cmd` in the text field. Press **Enter** (Windows 2003). Or open the Start menu, and type `cmd` in the **Search** field. Press **Enter** (Windows 2008, Windows Vista, Windows 7).
 - b) In the command window, type `ipconfig/all`, and make sure that the following parameters are set:
 - IP Address
 - Subnet Mask
 - Default Gateway
 - DNS Servers
- 5 Configure the network:

If...	Then...
If the network is already configured,	proceed to step 8 .
If the network is not already configured,	<p>perform the following actions:</p> <ol style="list-style-type: none"> 1 Double-click <code>..\Complement\OS\FSA4000\OS_Configuration.exe</code> in the Install list. 2 In the Settings for OS_Configuration.exe window, type the computer's IP address in the IP Address fields, according to the system IP Configuration plan. 3 Type the subnet mask in the Subnet mask fields, according to the system IP Configuration plan. 4 Type the Default Gateway IP address in the Default gateway fields, according to the system IP Configuration plan. 5 Type the DNS IP address in the Preferred DNS server fields, according to the System Configuration Plan. 6 Type the DNS IP address in the Alternate DNS server fields, according to the System Configuration Plan. Click OK.

Step result: The **Settings for OS_Configuration.exe** window closes.

- 6 If the AMC is in an L-core or M-core system, do the following:
 - a) If the **Settings for OS_Configuration.exe** window is not open, double-click `..\Complement\OS\FSA4000\OS_Configuration.exe` in the **Install** list.

- b) Type the DNS suffixes in the **DNS suffix** field, according to the System Configuration Plan.



Note: The DNS suffixes must be delimited by comma only, without spaces.

- c) Click **OK**.

Step result: The **Settings for OS_Configuration.exe** window closes.

- 7 If the **Settings for OS_Configuration.exe** window is open, click **OK**.

Step result: The **Settings for OS_Configuration.exe** window closes.

- 8 Configure the User and Company names:

- Double-click ..\Complement\OS\UserAndCompany.exe in the **Install** list.
- In the **Settings for UserAndCompany.exe** window, type the appropriate user name in the **User Name** field.
- Type the appropriate company name in the **Company Name** field. Click **OK**.

Step result: The **Settings for UserAndCompany.exe** window closes

- 9 Select **File → Execute installation**.



Note: The system reboots automatically. After reboot, WIF (Windows Installer Framework) continues the installation process.

Step result: Installation starts and the **WIF execution log** window appears.

- 10 Log in after the computer restarts.

- 11 When the **WIF execution log** window appears, click **OK**.

Step result: The **WIF execution log** window closes.

- 12 For Windows Vista only, configure Windows color and appearance. See *Configuring Window Color and Appearance on page 128*.

Installing the Port Expansion Unit USB Serial Hub Driver

When and where to use: Follow the procedure below to install the Port Expansion Unit USB serial hub driver.



Note:

- This procedure is for Windows Server 2003 R2-based AMC which is upgraded to ASTRO® 25 System Release 7.11 (on same hardware or new hardware) or for Disaster Recovery of an AMC which was upgraded to ASTRO® 25 System Release 7.11, and remained with Windows Server 2003 R2 OS.
- While performing this procedure, you need to be logged on locally to the AMC as motosec or Administrator, if motosec is not yet defined.

Procedure:

- 1 Insert the *FSA4000 Configuration Application S/W* or *FSA4000 Configuration Application S/W Upgrade* media into the optical drive.



Note:

- Before running this script, the external modem should be connected to the AMC.
- If the media does not open automatically, you can navigate to the root directory of the optical drive and double-click **AutoStart.exe**. If one or more security dialog boxes appear, for each dialog box, click **Yes**, or **Run**, or **OK**.

- 2 Click the **HP ProLiant ML110 G5/G6 Drivers** link, and then click the disc icon next to the **Comtrol Rocket Port USB Driver - for Windows Server 2003-based AMC only** entry.

- Do not connect the Port Expansion Unit cable to the USB port yet. This is done at the end of the installation process.
- If the cable is already connected, disconnect it.

- 3 When the **Welcome** dialog box appears, click **Next**.

- 4 When the `InstallShield Information` message appears, click **Next**.
- 5 When the `InstallShield Wizard Complete` message appears, click **Finish** to restart the system.
- 6 After the system restarts, connect the Port Expansion Unit cable to the USB port.

Installing Microsoft SQL Server 2005 Standard Edition

When and where to use:

Follow the procedure below to install Microsoft SQL Server 2005 Standard Edition with Service Pack 3.



Note:

For new installations and disaster recovery.

This procedure is for FSA4000 Alarm Printing option organizations only.

While performing this procedure, you need to be logged on locally to the AMC as motosec, or Administrator (if motosec is not yet defined).

The User Account Control dialog box may appear. If required, type the administrator user name and password. Click **Continue**, or **Allow**, or **OK**, or **Yes** to continue. Use the username you logged on with as the administrator user name.

Procedure:

- 1 Insert the *FSA4000 Configuration Application S/W* or *FSA4000 Configuration Application S/W Upgrade* media into the optical drive.



Note: If the media does not open automatically, you can navigate to the root directory of the optical drive and double-click **AutoStart.exe**. If one or more security dialog boxes appear, for each dialog box, click **Yes**, or **Run**, or **OK**.



Important:

If this is an AMC and Microsoft SQL Server 2005 is not installed, and the computer has more than one optical drive, make sure that the alphabetically first drive (for example, drive E, if there are E and F optical drives installed in the AMC) can read DVD media.

If the computer has more than one optical drive, use the alphabetically first drive (for example, drive E, if there are E and F optical drives installed in the AMC).

- 2 In the installation home page, click the **Microsoft SQL Server 2005** link, and then the **SQL Server 2005 with SP3 Unattended Installation** icon.



Note: If any security dialog box appears, click **Yes**, or **Run**, or **OK**.

- 3 In the **Windows Install Framework** window, perform the following actions:

- a) Double-click ..\Complement\SQLServer\InstallSQL.exe in the **Install** list.
- b) In the **Settings for InstallSQL.exe** window, type the product key in the **PRODUCT_KEY** Value field if required.
- c) Double-click the **DBA_PASSWORD** field.
- d) In the **Enter Password** dialog box, type a new complex password for the built-in database administrative SQL login in the **New Password** field. Refer to the Accounts Passwords list, for the default password to type.
 - The built-in database administrative SQL login name is **sa**.
 - Fields may not contain double quotation marks.
- e) Retype the same password in the **Confirm password** field and click **OK**.
- f) In the **Settings for InstallSQL.exe** window, click **OK**.

- g) Select **File → Execute installation.**

Step result: If this is an upgrade and the Microsoft SQL server was already installed on this computer, the computer restarts after the installation process is completed. The installation can take several minutes. Proceed to [step 6](#).

- 4 If the **Media Insert** dialog box appears asking you to insert Microsoft SQL Server 2005 DVD into the optical drive, perform the following actions:

- Verify that no USB device is plugged in. There is no need to unplug USB devices of any other type.
- Insert the *Microsoft SQL Server 2005 Standard Edition (32 bit) (For DVD Installations)* media. Click **OK**.



Important:

If the computer has more than one optical drive, use the alphabetically first drive (for example, drive E, if there are E and F optical drives installed in the AMC).



Note:

If an **AutoPlay** window appears or Internet Explorer window starts, close it.

Microsoft SQL Server installation can take several minutes.

If the Program Compatibility Assistant window appears, with a message that this program has known compatibility issues, click **Run program**.

Step result: When the Microsoft SQL Server 2005 installation is finished, the **Media Insert** dialog box appears asking you to insert FSA4000 DVD media into the optical drive.

- 5 When prompted to insert the FSA4000 media, perform the following actions:

- Remove the *Microsoft SQL Server 2005 Standard Edition* media from the optical drive.
- Insert the *FSA4000 Configuration Application S/W* media. Click **OK**.



Important: If the computer has more than one optical drive, use the alphabetically first drive (for example, drive E, if there are E and F optical drives installed in the AMC).



If an **AutoPlay** window appears, or an Internet Explorer window starts, close it.

Microsoft SQL Server Service Pack 3 installation can take several minutes.

Step result: After the installation process is complete, the computer restarts.

- Log in to the AMC.
- When the **WIF execution log** window, appears, click **OK**.

Step result: The WIF execution log window closes.

Installing the Wonderware ModbusSerial DAServer

When and where to use:

Follow the procedure below to install the Wonderware ModbusSerial DAServer.

**Note:**

This procedure is for new installations and disaster recovery.

While performing this procedure, you need to be logged on locally to the AMC as motosec, or Administrator (if motosec is not yet defined).

The User Account Control dialog box may appear. If required, type the administrator user name and password. Click **Continue**, or **Allow**, or **OK**, or **Yes** to continue. Use the username you logged on with as the administrator user name.

Procedure:

- 1 Insert the *FSA4000 Configuration Application S/W* or *FSA4000 Configuration Application S/W Upgrade* media into the optical drive.



Note: If the media does not open automatically, you can navigate to the root directory of the optical drive and double-click **AutoStart.exe**. If one or more security dialog boxes appear, for each dialog box, click **Yes**, or **Run**, or **OK**.

- 2 In the Installation home page, click on the **Wonderware Service Packs, Updates and HotFixes** link, and then the icon next to the **Wonderware ModbusSerial DAServer 2.5 SP2** entry.



Note: If one or more security dialog boxes appear, for each dialog box, click **Yes**, or **Run**, or **OK**.

- 3 In the **Wonderware MBSerial DAServer Setup** window, click **Next**.
- 4 In the **License Agreement** dialog box, select the **I Accept the License Agreement** option and click **Next**.
- 5 In the **Admin Installation Warning Notes** window, click **Next**.
- 6 In the **Select Features** dialog box, click **Next**.
- 7 The **User Name and Password** dialog box, perform the following actions:
 - a) Type the name of the MOSCAD InTouch communications account in the **User Name** field.



Note: The MOSCAD InTouch communications account username is MOSCAD.

- b) Type the appropriate password for the moscad account, in the **Password** field.
- c) Retype the same password in the **Confirm Password** field.
- d) Select **Create Local Account** and click **Next**.



Note: For upgrading, if you are using the same hardware as was used in a previous ASTRO® 25 system release, the Create Local Account must be clear.

- 8 In the **Ready to Install Wonderware MBSerial DAServer** window, click **Next**.
- 9 When the **Wonderware MBSerial DAServer has been successfully installed** dialog box appears, clear the **View Readme** checkbox, and then click **Finish**.



Note: If a Restart Dialog Box appears, click **Yes**.

Installing the Wonderware DAServer Runtime Components Upgrade

When and where to use:

Follow the procedure below to install the Wonderware DAServer Runtime components upgrade.

**Note:**

This procedure is for new installations and disaster recovery.

While performing this procedure, you need to be logged on locally to the AMC as motosec, or Administrator (if motosec is not yet defined).

The User Account Control dialog box may appear. If required, type the administrator user name and password. Click **Continue**, or **Allow**, or **OK**, or **Yes** to continue. Use the username you logged on with as the administrator user name.

Procedure:

- 1 Close all running applications.



Note: To close the SCADAlarm Advanced Telephonic Dialer, select **Access** → **Exit**. If **Exit** is unavailable, select **Access** → **Login** from the menu, and then select **Access** → **Exit**.

- 2 Open the Service management console:

- If the operating system is Windows 2003, press the **Windows icon key + R** to access the Run command prompt, type `services.msc` in the **Open** field and click **OK**.
- If the operating system is Windows 2008, Select **Start** and type `services.msc` in the **Search** field. Press **Enter**.



Note: If Wonderware SuiteLink Service is not running, the Stop command is disabled. Continue with the procedure.

- 3 Stop the Wonderware SuiteLink Service:

- 1 In the services management console, right-click the **Wonderware SuiteLink** service in the services list and select **Stop**.
- 2 Select **File** → **Exit**.
- 4 Insert the *FSA4000 Configuration Application S/W* or *FSA4000 Configuration Application S/W Upgrade* media into the optical drive.

**Note:**

If the media does not open automatically, you can navigate to the root directory of the optical drive and double-click **AutoStart.exe**.

If one or more security dialog boxes appear, for each dialog box, click **Yes**, or **Run**, or **OK**.

- 5 In the Installation home page, click the **Wonderware Service Packs, Updates and HotFixes** link, and then the icon next to the **Wonderware DAServer Runtime Components 3.0 SP1** entry.



Note: If one or more security dialog boxes appear, for each dialog box, click **Yes**, or **Run**, or **OK**.

- 6 In the **Prerequisites** window, click **Install Prerequisites**.

Step result: When the required prerequisites status changes to **Prerequisite met**, the prerequisites installation is complete.

- 7 Click **Next**.

- 8 In the **Wonderware DAServer Runtime Components Upgrade Setup** window, click **Next**.

- 9 In the **License Agreement** dialog box, select the **I accept the License Agreement** option. Click **Next**.

- 10 In the **Admin Installation Warning Notes** window, click **Next**.

- 11 In the **Upgrade Information** window, click **Next**.

Step result: The installation begins.

- 12 When the **DAServer Runtime Components Upgrade has been successfully installed** dialog box appears, clear the **View Readme** checkbox, and click **Finish**.



Note: If a Restart dialog box appears, click **Yes**.

Installing Wonderware InTouch

When and where to use:

Follow the procedure below to install Wonderware InTouch on the AMC, ALC, and consoles.



Note:

This procedure is for new installations and disaster recovery.

While performing this procedure, you need to be logged on locally to the AMC as motosec, or Administrator (if motosec is not yet defined), or to the ALC and consoles as secmoto.

The User Account Control dialog box may appear. If required, type the administrator user name and password. Click **Continue**, or **Allow**, or **OK**, or **Yes** to continue. Use the username you logged on with as the administrator user name.

If necessary, uninstall previous instances of Wonderware InTouch. See [Uninstalling Wonderware InTouch on page 85](#).

Procedure:

- 1 Close all running applications.
- 2 Insert the *FSA4000 Configuration Application S/W* or the *FSA4000 Configuration Application S/W Upgrade* media into the optical drive.



Note:

If the media does not open automatically, you can navigate to the root directory of the optical drive and double-click **AutoStart.exe**.

If one or more security dialog boxes appear, for each dialog box, click **Yes**, or **Run**, or **OK**.

- 3 In the installation home page, click the **Wonderware Service Packs, Updates and HotFixes** link, and then the icon next to the **Wonderware InTouch 10.1 with SP3 and Hotfixes 2292, 2294** entry.



Note: If one or more security dialog boxes appear, for each dialog box, click **Yes**, or **Run**, or **OK**.

- 4 In the **Windows Install Framework** window, double-click ..\Complement\WW\InTouch\InstallInTouch.exe in the **Install** list.

Step result: The **Settings for InstallInTouch.exe** window appears.

- 5 If the **COMM_PASSWORD** Value line exists, perform the following actions:

- a) Double-click the **COMM_PASSWORDValue** field.
- b) Type the appropriate password for the moscad account in the **New Password** field.
- c) Retype the same password in the **Confirm Password** field and click **OK**.

- 6 Click **OK**.

Step result: The **Settings for InstallInTouch.exe** window closes.

- 7 In the **Windows Install Framework** window, select **File → Execute installation**.



Note:

If installation requires a reboot, the reboot is performed automatically. The WIF continues running after the reboot.

You can check more details about the installation process in the Windows Event Logger.

The computer may restart several times during the installation process.

Step result: The installation starts and the **WIF execution log** window appears.

- 8 After the computer restarts, log in to the AMC or ALC.

Step result: After the initialization is completed, the installation continues.

- 9 When the **WIF execution log** window appears, click **OK**.



Note: If the **Windows Install Framework** window is still open after the **WIF execution log** window closes, close it.

Uninstalling Wonderware InTouch

When and where to use: Follow the procedure below to uninstall any previous instances of Wonderware software that may be present on your system.

- While performing this procedure, you need to be logged on locally to the AMC as motosec, or to the ALC and consoles as secmoto.
- The User Account Control dialog box may appear. If required, type the administrator user name and password. Click **Continue** or **Allow** or **OK** or **Yes** to continue. Use the username you logged on with as the administrator user name.

Procedure:

- 1 Open the list of programs:

- If the operating system is Windows 2008 or Windows 7, from the **Start** menu, select **Control Panel**. Click **Programs**. Click **Programs and Features**. Click **Uninstall or Change a Program**. If the Control Panel is in classic view, click **Control Panel Home** first.
- If the operating system is Windows 2003, select **Start** → **Settings**. Click **Control Panel**. Double-click **Add or Remove Programs**.
- If the operating system is Windows Vista, from the **Start** menu, click **Control Panel**. Double-click **Programs and Features**.

- 2 Select **Wonderware InTouch** from the list of currently installed programs.

- 3 Click **Remove** or **Uninstall**. Click **Yes**.

- 4 Close the **Add or Remove Programs/Programs and Features** window.

Installing the Wonderware InTouch License

When and where to use: Follow the procedure below to install the Wonderware InTouch License.



Note:

This procedure is for new installations and disaster recovery.

While performing this procedure, you must be logged on locally to the AMC as motosec, or Administrator (if motosec is not yet defined).

The User Account Control dialog box may appear. If required, type the administrator user name and password. Click **Continue**, or **Allow**, or **OK**, or **Yes** to continue. Use the username you logged on with as the administrator user name.

Procedure:

- 1 Open the License Utility:

- In a Windows Server 2003 system, from the **Start** menu, select **Programs** → **Wonderware** → **Common** → **License Utility**.
- In a Windows Server 2008 system, from the **Start** menu, select **All Programs** → **Wonderware** → **Common**, right-click on **License Utility**, and select **Run as administrator**.

- 2 In the **License Utility** window, select **File** → **Install License File**.

- 3 When the **Open** dialog box appears, perform the following actions:

- a) Insert the media or connect the drive with the Wonderware InTouch 10.1 License File, if necessary.



Note: If the Windows Explorer appears, close it.

- b) Navigate to the **WWSUITE.LIC** file, select it and click **Open**.
 c) In the **Destination Computer for Installation** dialog box, click **OK**. If a dialog box asking about overwriting the existing license appears, click **Overwrite**.



Note: For Disaster Recovery, if the license file was backed up, you can use either the backed up file or Wonderware InTouch 10.1 License media. The **WWSUITE.LIC** license file is backed up using [Backing Up the Wonderware InTouch License and SCADAlarm License File on page 186](#).

Step result: The license file is installed and the dialog box closes.

- 4 Select **File → Exit**.

Installing Wonderware SCADAlarm

When and where to use:

Follow the procedure below to install Wonderware SCADAlarm.



Note:

This procedure is for new installations and disaster recovery.

This procedure is for FSA4000 Alarm Paging option organizations only.

While performing this procedure, you need to be logged on locally to the AMC as motosec, or Administrator (if motosec is not yet defined).

The User Account Control dialog box may appear. If required, type the administrator user name and password. Click **Continue**, or **Allow**, or **OK**, or **Yes** to continue. Use the username you logged on with as the administrator user name.

Procedure:

- 1 Open the **Wonderware SCADAlarm setup** window:

If...	Then...
If you are installing using the Wonderware SCADAlarm X.YY media,	insert the media into the optical drive of the AMC. <ul style="list-style-type: none"> • If the media does not open automatically, you can navigate to the root directory of the optical drive and double-click the Setup.exe file.
If you are installing using the FSA4000 Configuration Application S/W or FSA4000 Configuration Application S/W Upgrade media,	do the following: <ol style="list-style-type: none"> 1 Insert the media into the optical drive. <ul style="list-style-type: none"> • If the media does not open automatically, you can navigate to the root directory of the optical drive and double-click AutoStart.exe. 2 Click on the Wonderware Service Packs, Updates and HotFixes link. 3 Click the icon next to the Wonderware SCADAlarm X.YY entry.



Note:

If one or more security dialog boxes appear, for each dialog box click **Yes**, or **Run**, or **OK**.

If a warning appears that an existing FactorySuite product has been detected on this PC, click **OK**.

- 2 In the **Wonderware SCADAlarm setup** window, click **Next**.

- 3 In the **License Agreement** dialog box, click **Click I accept the license agreement**, after reading the Wonderware End User License Agreement, and then click **Next**.
- 4 In the **Select Installation Type** dialog box, select **Full** to install the full version of the SCADAlarm software, and click **Next**.
 - If the installation program detects that you do not have the required hardware, the **Hardware Prerequisite Check** dialog box appears. To continue with the installation, click **Next**.
- 5 In the **Destination Folder** dialog box, click **Next**.
- 6 In the **Default Data Source Name** dialog box, click **Next**.
- 7 In the **Configuration Properties** dialog box, click **Next**.
- 8 In the **Ready to Install the Application** dialog box, select **Run SCADAlarm at Startup** and click **Next**.
- 9 When the **Wonderware SCADAlarm has been successfully installed** dialog box appears, click **Finish**.
- 10 Remove the media from the optical drive.
 - If the **Reboot** dialog box appears, click **Yes** to reboot the system.

Installing the Wonderware SCADAlarm Patch

When and where to use: Follow the procedure below to install the Wonderware SCADAlarm Patch.

- While performing this procedure, you need to be logged on locally to the AMC as motosec or Administrator, if motosec is not yet defined.
- The User Account Control dialog box may appear. If required, type the administrator user name and password. Click **Continue** or **Allow** or **OK** or **Yes** to continue. Use the username you logged on with as the administrator user name.

Procedure:

- 1 Close all running applications on the computer.
- 2 Insert the *FSA4000 Configuration Application S/W* or *FSA4000 Configuration Application S/W Upgrade* media into the optical drive.



Note:

- If the media does not open automatically, you can navigate to the root directory of the optical drive and double-click **AutoStart.exe**.
- If one or more security dialog boxes appear, for each dialog box click **Yes** or **Run**, or **OK**.

- 3 In the installation home, page, click on the **Wonderware Service Packs, Updates and HotFixes** link.
- 4 Click the icon next to the **Wonderware SCADAlarm 6.0 SP2 Patch 1** entry.



Note: If any security dialog boxes appear, for each dialog box click **Yes** or **Run**, or **OK**.

- 5 In the **Wonderware SCADAlarm** setup window, click **Next**.

Step result:

- 6 When a message appears that the Wonderware SCADAlarm has been successfully patched, click **Finish**.

Installing the Wonderware SCADAlarm License File

When and where to use: Follow the procedure below to install the Wonderware SCADAlarm license file.

- This procedure is for new installations and disaster recovery.
- This procedure should be performed for disaster recovery only if the license file was not backed up.
- This procedure is for FSA4000 Alarm Paging option organizations only.
- While performing this procedure, you need to be logged on locally to the AMC as motosec or Administrator, if motosec is not yet defined.

- The User Account Control dialog box may appear. If required, type the administrator user name and password. Click **Continue** or **Allow** or **OK** or **Yes** to continue. Use the username you logged on with as the administrator user name.

Procedure:

- If the Wonderware SCADAlarm software is running, select **Access** → **Exit** to shut it down.
 - If the Exit option in the Access menu is disabled, click **Access** → **Login** and then select **Access** → **Exit**
 - If a message appears that the SCADAlarm License key is not found or expired, click **Abort**.
- Insert the media with the Wonderware SCADAlarm 6.0 License File into the optical drive.
 - If the media does not open automatically, you can navigate to the root directory of the optical drive and double-click `AutoStart.exe`.
 - If any security dialog boxes appear, for each dialog box click **Yes** or **Run** or **OK**.
 - If Windows Explorer appears, close it.
- From the **Start** menu, select **Programs/All Programs** → **Wonderware** → **Common** → **License Utility**
- In the **License Utility** window, select **File** → **Install License File**
- In the **Choose a License File to install** dialog box, navigate to the license file on the CD and click **Open**.
- In the **Destination Computer for Installation** dialog box, click **OK**.
- In the **Installing a license file** dialog box, click **Add**. If this is an upgrade, if a dialog box asking about overwriting the existing license appears, click **Overwrite**.
- Select **File** → **Exit**.
- Click the **SCADAlarm** icon on the desktop to run the Wonderware SCADAlarm.

Step result: If the **Edit/Change Operator Information** dialog appears, click **Done** and then **Yes**.

Configuring the Wonderware InTouch Alarm DB Logger

When and where to use:

Follow the procedure below to configure the Wonderware InTouch Alarm DB logger.



Note:

This procedure is for new installations and disaster recovery.

This procedure is for FSA4000 Alarm Printing option organizations only.

While performing this procedure, you need to be logged on locally to the AMC as motosec, or Administrator (if motosec is not yet defined).



Note: The User Account Control dialog box may appear. If required, type the administrator user name and password. Click **Continue**, or **Allow**, or **OK**, or **Yes** to continue. Use the username you logged on with as the administrator user name.

Procedure:

- Open the **Wonderware Alarm DB Logger Manager** application:
 - If the operating system is Windows Server 2003, from the **Start** menu, select **Programs/All Programs** → **Wonderware** → **InTouch** → **Alarm DB Logger Manager**.
 - If the operating system is Windows Server 2008, from the **Start** menu, select **Programs/All Programs** → **Wonderware** → **InTouch**, right-click **Alarm DB Logger Manager**, and select **Run as administrator**.
- In the **Alarm DB Logger Manager** dialog box, do the following:
 - If the settings button is available, click **Settings**.
 - If the settings button is not available, click **Stop** and then click **Settings**.
- In the **Alarm DB Logger Manager - Configuration** dialog box, do the following:
 - Type `localhost` in the **Server Name** field.

- b) Type WWALMDB in the **Database** field.
- 4 Set the Logging Mode:**
- If you are performing a new installation of the system, set **Logging Mode to Consolidated**.
 - If you are performing an upgrade on the same hardware, without reinstalling the operating system, make sure that chosen mode fits the previous system mode, and proceed to [step 7](#).
-  **Note:**
- The selected mode must match the previous system mode. If a different mode is chosen, the system may not work properly.
 - Use the `Logging_Mode_rtf` file saved in the backup location to check the previous system logging mode configuration.
- 5 Log in as the built-in database administrator:**
- a) Type the built-in database administrative login name in the **User Name** field. The built-in database administrative SQL login name is **sa**.
 - b) Type the password for the built-in database administrative SQL login in the **Password** field. Although the password field shows only 13 characters, a longer password may be used.
- 6 Click Test Connection.**
- If a message appears that the connection succeeded, click **OK**.
 - If a message appears that the WWALMDB database not present, click **OK** in the message box, click **Create**, and click **OK**.
 - If a message appears that the connection failed, correct the data entered in [step 3](#) and [step 5](#) and click **Test Connection** again.
- 7 Log in as the wwadmin user:**
- a) In the **User Name** field, type **wwadmin**.
 - b) In the **Password** field, type the default password for the wwadmin SQL login.
- Although the password field shows only 13 characters, a longer password may be used.
 - In ASTRO® 25 System Release 7.11, the default non-complex password of the wwAdmin SQL login is later replaced with a more complex password, during the SQL Server Configuration installation. Refer to your system's Accounts & Passwords list for the default password to type.
- 8 Click Test Connection.**
- If a message appears that the test succeeded, click **OK**.
 - If a message appears that the test failed, correct the data entered in [step 3](#) and [step 5](#), and click **Test Connection** again.
- 9 Click Next.**
- 10** In the **Alarm DB Logger Query Selection** dialog box, click **Next** to accept the defaults.
- Step result:** The Alarm DB Logger Advanced Settings dialog box appears.
- 11** In the **Running Logger As** selection area, select **Normal Application** and click **Finish**.
- 12** Close the **Alarm DB Logger Manager** dialog box.

Renaming the Administrative Account

When and where to use:

Follow the procedure below to rename the administrative account.

**Note:**

- This procedure is for Windows Vista and Windows 7 systems only.
- This procedure is for new ALC computers that were pre-loaded with the Synnex image.
- While performing this procedure, you need to be logged on to the ALC as User-ADM.
- The User Account Control dialog box may appear. If required, type the administrator user name and password. Click **Continue**, or **Allow**, or **OK**, or **Yes** to continue. Use the username you logged on with as the administrator user name.

Procedure:

- 1 Type `lusrmgr.msc` in the **Search** field of the **Start** menu and press **Enter**.



Note: Alternatively, if the **Start** menu is classic, press the **Windows icon** key + **R** to access the Run command prompt, and then type `lusrmgr.msc` in the **Open** field. Press **Enter**.

- 2 In the **Local Users and Groups management** console, select **Users** in the main pane.
- 3 Rename the administrative account:
 - a) Right-click the **User-ADM** user in the user list and select **Rename**.
 - b) Type `SecMoto` in the **Name** field and press **Enter**.
- 4 Log off the ALC.

Installing FSA4000 Users and Groups

When and where to use:

Follow the procedure below to install FSA4000 users and groups.

**Note:**

This procedure is for new installations and disaster recovery.

While performing this procedure, you need to be logged on locally to the AMC as motosec or Administrator, if motosec is not yet defined, or logged on locally to the ALC and consoles as secmoto.

The User Account Control dialog box may appear. If required, type the administrator user name and password. Click **Continue**, or **Allow**, or **OK**, or **Yes** to continue. Use the username you logged on with as the administrator user name.

Procedure:

- 1 Close all running applications on the computer.
- 2 Insert the *FSA4000 Configuration Application S/W* or *FSA4000 Configuration Application S/W Upgrade* media into the optical drive.



Note: If the media does not open automatically, you can navigate to the root directory of the optical drive and double-click `AutoStart.exe`. If any security dialog boxes appear, for each dialog box, click **Yes**, or **Run**, or **OK**.

- 3 In the installation home page, click the **FSA4000 Users and Groups** link, and then the icon next to the **FSA4000 Users and Groups X.YY** entry.



Note: If one or more security dialog boxes appear, for each dialog box, click **Yes**, or **Run**, or **OK**.

- 4 In the **Welcome** window, click **Next**.
- 5 In the **License Agreement** dialog box, click **I accept the license agreement**, after reading the License Agreement. Click **Next**.
- 6 In the **Inter-Vista user** dialog box, configure the password:
 - a) In the **Password** field, type a new complex password for the administrator account for Vista inter-operations. Refer to the Accounts Passwords list for the default password to type.
 - b) Retype the same password in the **Confirm Password** field.

- c) Make sure that **Use the same password for all FSA4000 users** is unchecked. Click **Next**.



Note: The default administrator account for Vista inter-operation username is SecMoto.

- 7 In the **fsadmin information** dialog box, do the following:
 - a) Type a new complex password for the fsadmin account in the **Password** field. Refer to the Accounts Passwords list for the default password to type.
 - b) Retype the same password in the **Confirm Password** field. Click **Next**.
- 8 In the **fsadispatcher information** dialog box, do the following:
 - a) Type a new complex password for the fsadispatcher account, in the **Password** field. Refer to the Accounts Passwords list for the default password to type.
 - b) Retype the same password in the **Confirm Password** field. Click **Next**.
- 9 In the **dbFsaRepGen information** dialog box, do the following:
 - a) Type a new complex password for the dbFsaRepGen account, in the **Password** field. Refer to the Accounts Passwords list for the default password to type.
 - b) Retype the same password in the **Confirm Password** field. Click **Next**.
- 10 In the **saMoscad information** dialog box, do the following:
 - a) Type a new complex password for the saMoscad account, in the **Password** field. Refer to the Accounts Passwords list, for the default password to type.
 - b) Retype the same password in the **Confirm Password** field. Click **Next**.
- 11 In the **MSSqlServer information** dialog box, do the following:
 - a) Type a new complex password for the MSSqlServer account, in the **Password** field. Refer to the Accounts Passwords list, for the default password to type.
 - b) Retype the same password in the **Confirm Password** field. Click **Next**.
- 12 In the **SQLServerAgent information** dialog box, do the following:
 - a) Type a new complex password for the SQLServerAgent account in the **Password** field. Refer to the Accounts Passwords list, for the default password to type.
 - b) Retype the same password in the **Confirm Password** field. Click **Next**.
- 13 In the **SQLServerBrowser information** dialog box, do the following:
 - a) Type a new complex password for the SQLServerBrowser account, in the **Password** field. Refer to the Accounts Passwords list, for the default password to type.
 - b) Retype the same password in the **Confirm Password** field. Click **Next**.
- 14 In the **Ready to Install the Program** dialog box, click **Install**.
- 15 In the **InstallShield Wizard Complete** dialog box, click **Finish**.



Note: If a reboot is required, a dialog box appears. Click **Yes** to reboot.

Installing the InTouch Configuration

When and where to use: Follow the procedure below to install the InTouch configuration.

**Note:**

This procedure is for new installations and disaster recovery.

While performing this procedure, you need to be logged on locally to the AMC as motosec or Administrator, if motosec is not yet defined, or logged on locally to the ALC and consoles as secmoto.

The User Account Control dialog box may appear. If required, type the administrator user name and password. Click **Continue**, or **Allow**, or **OK**, or **Yes** to continue. Use the username you logged on with as the administrator user name.

If necessary, uninstall previous versions of the InTouch Configuration. See [Uninstalling the InTouch Configuration on page 92](#).

Procedure:

- 1 Close all running applications on the computer.
- 2 Insert the *FSA4000 Configuration Application S/W* or *FSA4000 Configuration Application S/W Upgrade* media into the optical drive.



Note: If the media does not open automatically, you can navigate to the root directory of the optical drive and double-click `AutoStart.exe`. If one or more security dialog boxes appear, for each dialog box, click **Yes**, or **Run**, or **OK**.

- 3 In the installation home page, click the **InTouch Configuration** and then click the disc icon next to the **InTouch Configuration X.YY** entry.



Note: If any security dialog boxes appear, for each dialog box, click **Yes**, or **Run**, or **OK**.

- 4 In the **Welcome** dialog box, click **Next**.
- 5 In the **License Agreement** dialog box, click **I accept the license agreement**, after reading the License Agreement. Click **Next**.
- 6 In the **Ready to Install the Program** dialog box, click **Install**.
- 7 In the **InstallShield Wizard Complete** dialog box, click **Finish**.



Note: If a reboot is required, a dialog box appears. Click **Yes** to reboot.

Uninstalling the InTouch Configuration

When and where to use: Perform the procedure below to uninstall any previous instances of InTouch software that may be present on your system.

**Note:**

- While performing this procedure, you need to be logged on locally to the AMC as motosec, or to the ALC and consoles as secmoto.
- The User Account Control dialog box may appear. If required, type the administrator user name and password. Click **Continue** or **Allow** or **OK** or **Yes** to continue. Use the username you logged on with as the administrator user name.

Procedure:

- 1 Open the list of programs:

- If the operating system is Windows 2008 or Windows 7, from the **Start** menu, select **Control Panel**. Click **Programs**. Click **Programs and Features**. Click **Uninstall or Change a Program**. If the Control Panel is in classic view, click **Control Panel Home** first.
- If the operating system is Windows 2003, select **Start** → **Settings**. Click **Control Panel**. Double-click **Add or Remove Programs**.

- If the operating system is Windows Vista, from the **Start** menu, click **Control Panel**. Double-click **Programs and Features**.
- 2 Select **InTouch Configuration X.YY** or **InTouch ZZ Configuration X.YY** from the list of currently installed programs.
 - 3 Click **Remove** or **Uninstall**. Click **Yes**.
 - 4 Close the **Add or Remove Programs/Programs and Features** window.

Installing the FSA4000 Dispatch Software Application

When and where to use:

Follow the procedure below to install the FSA4000 Dispatch Software application on an AMC or ALC computer.



Note:

This procedure is for new installations and disaster recovery.

While performing this procedure, you need to be logged on locally to the AMC as motosec or Administrator, if motosec is not yet defined, or logged on to the ALC and consoles as secmoto.

The User Account Control dialog box may appear. If required, type the administrator user name and password. Click **Continue**, or **Allow**, or **OK**, or **Yes** to continue. Use the username you logged on with as the administrator user name.

Procedure:

- 1 If required, change the screen resolution:

- This step is optional and should be only performed when a screen resolution other than the default is required.
- For disaster recovery, check the data saved in the backup location in the **Screen_Resolution.rtf** file, and set the resolution to the original screen resolution of the upgraded system.

If...	Then...
If you are installing the software on the Windows 2003 operating system,	<ol style="list-style-type: none"> 1 Right-click on the desktop and select Properties. 2 In the Display Properties dialog box appears, select the Settings tab. 3 Set the Screen resolution slider to '800 by 600 pixels' or '1024 by 768 pixels'. Click OK. <p> Note: If a dialog box appears, asking you to confirm resolution changes, click Yes.</p>
If you are installing the software on the Windows 2008 operating system,	<ol style="list-style-type: none"> 1 Right-click on the desktop and select Screen Resolution. 2 Click the Resolution drop-down box. 3 Set the Screen resolution slider to '800 by 600 pixels' or '1024 by 768 pixels'. Click OK. <p> Note: If a dialog box appears, asking you to confirm resolution changes, click Yes.</p>

- 2 Insert the *FSA4000 Configuration Application S/W* or *FSA4000 Configuration Application S/W Upgrade* media into the optical drive.



Note: If the media does not open automatically, you can navigate to the root directory of the optical drive and double-click **AutoStart.exe**. If one or more security dialog boxes appear, for each dialog box, click **Yes**, or **Run**, or **OK**.

- 3 In the installation home page, click the **FSA4000 Dispatch Software** link, and then the disc icon next to the **FSA4000 Dispatch Software X.YY** entry.



Note: If one or more security dialog boxes appear, for each dialog box, click **Yes**, or **Run**, or **OK**.

- 4 In the **Welcome** dialog box, click **Next**.
- 5 In the **License Agreement** dialog box, click **I accept the license agreement**, after reading the License Agreement. Click **Next**.
- 6 In the **User Information** dialog box, do the following:
 - a) In the **Name** field, type a name.
 - b) In the **Organization** field, type a name. Click **Next**.
- 7 In the **Screen Resolution** dialog box, click **Next**.



Note:

The selected option in the Screen Resolution dialog box reflects the current OS screen resolution, as detected by the software. (If the current screen resolution is other than 800 by 600 pixels or 1024 by 768 pixels, the default resolution of 800 by 600 is used).

If the detected/default screen resolution for the FSA4000 Dispatch application is changed, the OS resolution should be changed accordingly, before launching the application.

- 8 In the **Ready to Install the Program** dialog box, click **Install**.

Step result: The installation process begins.

- 9 Do the following:
 - If you are installing on the AMC in a system which includes redundant FEPs, click **Yes** when prompted about FEP redundancy.
 - If you are installing on the AMC in a system which does not include redundant FEPs, click **No** when prompted about FEP redundancy.
 - If you are installing on the ALC, MCC7500 Console, CENTRACOM Gold Elite Dispatch Console, continue.
- 10 In the **InstallShield Wizard Completed** dialog box, click **Finish**.

Configuring the Wonderware ModbusSerial DAServer for FSA4000 Dispatch Software

When and where to use:

Follow the procedure below to configure the Wonderware ModbusSerial DAServer for FSA4000 Dispatch Software.



Note:

This procedure is for new installations and disaster recovery.

While performing this procedure, you need to be logged on locally to the AMC as motosec, or Administrator (if motosec is not yet defined).



Note: The User Account Control dialog box may appear. If required, type the administrator user name and password. Click **Continue**, or **Allow**, or **OK**, or **Yes** to continue. Use the username you logged on with as the administrator user name.

Procedure:

- 1 To open the System Management Console window, select **Start** → **Programs/All Programs** → **Wonderware** → **System Management Console**.
- 2 In the **ArchestraA System Management Console** window, navigate to **ArchestraA.DASMBSerial** as follows:
 - a) Expand **DAServer Manager**.
 - b) Expand the**Default Group**.
 - c) Expand **Local**.

Step result: The ArchestraA.DASMBSerial.2 entry appears.

- 3 If ArchestraA.DASMBSerial is not configured to run as **Not a Service**, do the following:

- a) Right-click **ArchestraA.DASMBSerial.2** and select **Configure As Service → Not a Service**.
- b) In the **DAServer Manager** window, click **Yes**.
- 4 To apply the configuration to the ArchestraA.DASMBSerial, do the following:
 - a) Expand **ArchestraA.DASMBSerial.2**.
 - b) Right-click **Configuration** and select **Use Another Configuration Set → fsadaserver**.
-  **Note:** If the fsadaserver option is already selected, it is disabled in the pop-up menu. In this case, close the **Use Another Configuration Set** menu.
- 5 To enable RTS/CTS support if a Fiber Optic Line Extender is used, do the following:
 - a) Expand **Configuration**.
 - b) Select a communication port that is connected using the Fiber Optic Line Extender.
 - c) Check the **Enable RTS/CTS support** checkbox and click the disc (save) icon in the upper right corner of the COM port parameters screen.
 - d) Repeat for each communication port used in the system, a Fiber Optic Line Extender is used.
- 6 To activate the Wonderware ModbusSerial DAServer, right-click **ArchestraA.DASMBSerial.2** and select **Activate Server**.
- 7 Select **File → Exit**.

Installing SQL Server 2005 Configuration

When and where to use:

Follow the procedure below to install the SQL Server 2005 configuration.



Note:

This procedure is for new installations and disaster recovery.

This procedure is for FSA4000 Alarm Printing option organizations only.

While performing this procedure, you need to be logged on locally to the AMC as motosec, or Administrator (if motosec is not yet defined)

The User Account Control dialog box may appear. If required, type the administrator user name and password. Click **Continue**, or **Allow**, or **OK**, or **Yes** to continue. Use the username you logged on with as the administrator user name.



Important: Failure to enter the passwords correctly may result in non-functional features.

Procedure:

- 1 Close all running applications.
- 2 Insert the *FSA4000 Configuration Application S/W* or *FSA4000 Configuration Application S/W Upgrade* media with SQL Server 2005 Configuration setup into the optical drive.
-  **Note:** If the media does not open automatically, you can navigate to the root directory of the optical drive and double-click *AutoStart.exe*. If one or more security dialog boxes appear, for each dialog box, click **Yes**, or **Run**, or **OK**.
- 3 In the Installation home page, click the **SQL Server 2005 Configuration** link, and then click the disc icon next to the **SQL Server 2005 Configuration X.YY** entry.



Note: If one or more security dialog boxes appear, for each dialog box, click **Yes**, or **Run**, or **OK**.

Step result: The Installation Wizard for the SQL Server Configuration begins.

- 4 In the **Welcome** dialog box, click **Next**.

Step result: The License Agreement dialog box appears.

- 5 In the **License Agreement** dialog box, click **I accept the license agreement**, after reading the License Agreement. Click **Next**.
- 6 When a prompt appears asking you to select the Database Server and the authentication method, do the following:
 - a In the **Database Server** drop-down list, select the (local) database.
 - b Under **Connect Using**, select **Server Authentication using Login ID and password**.
 - c In the **Login ID** field, enter the built-in database administrative SQL login name **sa**.
 - d In the **Password** field, and enter the password for the **sa** login. Click **Next**.
- 7 In the **Password** dialog box, enter the existing password for the **MSSqlServer** account. Click **Next**.
- 8 In the **Password** dialog box, enter the existing password for the **SQLServerAgent** account. Click **Next**.
- 9 In the **Password** dialog box, enter the existing password for the **SQLServerBrowser** account. Click **Next**.
- 10 In the **Password** dialog box, set a new password:
 - a In the **Password** field, type a new complex password for the **wwAdmin SQL** login. Refer to the Accounts Passwords list for the default password.
 - b In the **Confirm Password** field, retype the same password. Click **Next**.
- 11 In the **Password** dialog box, set a new password:
 - a In the **Password** field, type a new complex password for the **wwPower SQL** login. Refer to the Accounts Passwords list for the default password.
 - b In the **Confirm Password** field, retype the same password. Click **Next**.
- 12 In the **Password** dialog box, set a new password:
 - a In the **Password** field, type a new complex password for the **wwUser SQL** login. Refer to the Accounts Passwords list for the default password.
 - b In the **Confirm Password** field, retype the same password. Click **Next**.
- 13 Click **Install**.
- 14 In the **InstallShield Wizard Completed** dialog box, click **Finish**.
- 15 When the message appears that you must restart your system, in the **Window File Protection** dialog box, click **Cancel**. Click **Yes**.

Step result: The system restarts.

Installing the FSA4000 Report Generator

When and where to use:

Follow the procedure below to install the FSA4000 Report Generator.



Note:

This procedure is for new installations and disaster recovery.

This procedure is for FSA4000 Alarm Printing option organizations only.

While performing this procedure, you need to be logged on locally to the AMC as motosec, or Administrator (if motosec is not yet defined) and logged on locally to the ALC and consoles as secmoto.

The User Account Control dialog box may appear. If required, type the administrator user name and password. Click **Continue**, or **Allow**, or **OK**, or **Yes** to continue. Use the username you logged on with as the administrator user name.

Procedure:

- 1 Insert the *FSA4000 Configuration Application S/W* or *FSA4000 Configuration Application S/W Upgrade* media into the optical drive.



Note: If the media does not open automatically, you can navigate to the root directory of the optical drive and double-click *AutoStart.exe*. If one or more security dialog boxes appear, for each dialog box, click **Yes**, or **Run**, or **OK**.

- 2 In the installation home page, click the **FSA4000 Report Generator** link, and then click the disc icon next to the **FSA4000 Report Generator X.YY** entry.



Note:

If one or more security dialog boxes appear, for each dialog box, click **Yes**, or **Run**, or **OK**.

If more installations are required, and a pop-up message window appears, click **Install**.

- 3 In the **Welcome** dialog box, click **Next**.
- 4 If you are installing on the AMC, in the **Database Server** dialog, perform the following actions:
 - a) Select **(local)** as Database Server.
 - b) Select **Windows authentication credentials of current user**. Click **Next**.
- 5 In the **Ready to Install** dialog box, click **Install**.
- 6 When a message appears that Report Generator setup was completed successfully, click **Finish**.



Note: If a message appears that system reboot is needed, click **Yes** to reboot the system.

Installing ACE3600 System Tools Suite (STS) 10.50

When and where to use: Follow the procedure below to install the ACE3600 System Tools Suite (STS).



Note:

For Windows 2003-based AMC upgrade without reinstallation of the operating system, this procedure is performed only if the ACE3600 System Tools Suite 10.50 is not already installed (for example, ASTRO® 25 System Release 7.7 IA organizations are required to uninstall it). If ACE3600 System Tools Suite 10.50 is installed, **STS1050** or **Motorola ACE3600 System Tools Suite** appear in the currently installed programs list, in the **Add or Remove Programs** window.

This procedure is for new installations, disaster recovery, or upgrades that include reinstallation of the operating system. If your system is ASTRO® 25 System Release 7.4, 7.5, 7.6, or 7.7 and you do not have the current version of the *FSA4000 Configuration Application S/W* media, use the latest available version.

While performing this procedure, you need to be logged on locally to the AMC as motosec or Administrator, if motosec is not yet defined.

The User Account Control dialog box may appear. If required, type the administrator user name and password. Click **Continue** or **Allow** or **OK** or **Yes** to continue. Use the username you logged on with as the administrator user name.

Procedure:

- 1 Insert the *FSA4000 Configuration Application S/W* media into the optical drive.



Note:

If the media does not open automatically, you can navigate to the root directory of the optical drive and double-click **AutoStart.exe**.

If any security dialog boxes appear, for each dialog box, click **Yes**, or **Run**, or **OK**.

- 2 In the installation home page, click the **ACE3600 System Tools Suite** link, and then click the disc icon next to the **ACE3600 System Tools Suite 10.50** entry.



Note: If any security dialog boxes appear, for each dialog box, click **Yes**, or **Run**, or **OK**.

Step result: The InstallShield Wizard dialog box appears.

- 3 Close all STS applications. Click **Next**.
- 4 In the **Welcome** dialog box, click **Next**.

- 5 In the **License Agreement** dialog box, click **I accept the terms in the license agreement**, after reading the License Agreement. Click **Next**.
- 6 In the **User Information** dialog box, do the following:
 - a) In the **Name** field, type a name.
 - b) In the **Company** field, type a name. Click **Next**.
- 7 In the **Choose Destination Location** dialog box, click **Next**.
- 8 In the **Ready to Install** dialog box, click **Install**.
- 9 When the **InstallShield Wizard Complete** dialog box appears, select **Yes, I want to restart my computer now** (if it appears). Click **Finish**.

Step result: Installation is complete.

Installing the FSA4000 Configuration Tool

When and where to use: Follow the procedure below to install the FSA4000 Configuration Tool.



Note:

For upgrade and expansion installation, this procedure is performed only if the FSA4000 Configuration Tool was uninstalled from the previous installation (as done, for example, for IA organizations).

For any ASTRO® 25 System Release 7.4, 7.5, 7.6, 7.7, 7.8, or 7.9 original organizations that do not have the current version of the *FSA4000 Configuration Application S/W* media, use the latest available version.

This procedure is for AMC and FSA4000 AUX I/O systems.

While performing this procedure, you need to be logged on locally to the AMC as motosec, or Administrator (if motosec is not yet defined).

The **User Account Control** dialog box may appear. If required, type the administrator user name and password. Click **Continue**, or **Allow**, or **OK**, or **Yes** to continue. Use the username you logged on with as the administrator user name.

Procedure:

- 1 Insert the *FSA4000 Configuration Application S/W* media into the optical drive.



Note: If the media does not open automatically, you can navigate to the root directory of the optical drive and double-click *AutoStart.exe*. If one or more security dialog boxes appear, for each dialog box, click **Yes**, or **Run**, or **OK**.

- 2 In the installation home page, click the **FSA4000 Configuration Tool** link, and then click the disc icon next to the **FSA4000 Configuration Tool X.YY** entry.



Note:

If one or more security dialog boxes appear, for each dialog box, click **Yes**, or **Run**, or **OK**.

If more installations are required a pop-up message window appears, click **Install**.

- 3 In the **Welcome** dialog box, click **Next**.
- 4 In the **License Agreement** dialog box, click **I accept the license agreement**, after reading the License Agreement. Click **Next**.
- 5 If you are installing using the ASTRO® 25 System Release 7.4, 7.5, 7.6, 7.7, 7.8 or 7.9 version of the media, in the **User Information** dialog box, do the following:
 - a) In the **Name** field, type a name.
 - b) In the **Company** field, type a name. Click **Next**.
- 6 In the **Destination Folder** dialog box, click **Next**.
- 7 In the **Ready to Install the Program** dialog box, click **Install**.

Step result: The installation begins.

- 8 In the **InstallShield Wizard Completed** dialog box, click **Finish**.

Installing the FSA4000 Configuration Tool InTouch AMC Server License

When and where to use:

Follow the procedure below to install the FSA4000 Configuration Tool InTouch AMC Server license.



Note:

For expansion installation, this procedure is performed only if the FSA4000 Configuration Tool was uninstalled from previous installation (for example, for IA organizations). •

For any ASTRO® 25 System Release 7.4, 7.5, 7.6, 7.7, 7.8 or 7.9 original organizations that do not have the current version of the *FSA4000 AMC Server GUI Application License* media, use the latest available version.

This procedure is for new installations, disaster recovery, and expansion.

While performing this procedure, you need to be logged on locally to the AMC as motosec, or Administrator (if motosec is not yet defined).



Note: The **User Account Control** dialog box may appear. If required, type the administrator user name and password. Click **Continue**, or **Allow**, or **OK**, or **Yes** to continue. Use the username you logged on with as the administrator user name.

Procedure:

- 1 Insert the *FSA4000 AMC GUI Application License* media into the optical drive.



Note: If the media does not open automatically, you can navigate to the root directory of the optical drive and double-click *AutoStart.exe*. If one or more security dialog boxes appear, for each dialog box, click **Yes**, or **Run**, or **OK**.

- 2 In the installation home page, click the **FSA4000 AMC GUI Application License** or **FSA4000 Configuration Tool - AMC Plug-In** link, and then click the disc icon next to the **FSA4000 AMC GUI Application License X.YY** or **FSA4000 Configuration Tool - AMC Plug-In X.YY** entry.



Note:

If the Active Content Warning dialog box appears, click **Yes**.

If the Security Warning dialog box appears, click **Run**.

If another Security Warning dialog box appears, click **Run**.

- 3 In the **Welcome** dialog box, click **Next**.
- 4 In the **License Agreement** dialog box, select **I accept the terms in the license agreement**, after reading the License Agreement. Click **Next**.

- 5 In the **Ready to Install the Program** dialog box, click **Install**.

Step result: The installation begins.

- 6 In the **InstallShield Wizard Completed** dialog box, click **Finish**.

Installing the FSA4000 Configuration Tool InTouch ALC Client License

When and where to use:

Follow the procedure below to install the FSA4000 Configuration Tool InTouch ALC client license.

**Note:**

This procedure is optional and must be performed only when ALC clients are used in the system.

For expansion installation, this procedure is performed only if the FSA4000 Configuration Tool was uninstalled from the previous installation (for example, for IA organizations).

For any ASTRO® 25 System Release 7.4, 7.5, 7.6, 7.7, 7.8 or 7.9 original organizations that do not have the current version of the *FSA4000 ALC Client GUI Application License* media, use the latest available version.

This procedure is for new installations, disaster recovery, and expansion.

While performing this procedure, you need to be logged on locally to the AMC as motosec, or Administrator (if motosec is not yet defined).

The User Account Control dialog box may appear. If required, type the administrator user name and password. Click **Continue**, or **Allow**, or **OK**, or **Yes** to continue. Use the username you logged on with as the administrator user name.

Procedure:

- 1 Insert the *FSA4000 ALC Client GUI Application License* media into the optical drive.



Note: If the media does not open automatically, you can navigate to the root directory of the optical drive and double-click `AutoStart.exe`. If one or more security dialog boxes appear, for each dialog box, click **Yes**, or **Run**, or **OK**.

- 2 In the installation home page, click the **FSA4000 ALC Client GUI Application License** or **FSA4000 Configuration Tool - ALC Plug-In** link, and then click the disc icon next to the **FSA4000 ALC GUI Application License X.YY** or **FSA4000 Configuration Tool - ALC Plug-In X.YY** entry.

**Note:**

If the Active Content Warning dialog box appears, click **Yes**.

If the Security Warning dialog box appears, click **Run**.

If another Security Warning dialog box appears, click **Run**.

- 3 In the **Welcome** dialog box, click **Next**.
- 4 In the **License Agreement** dialog box, select **I accept the terms in the license agreement**, after reading the License Agreement. Click **Next**.
- 5 In the **Ready to Install the Program** dialog box, click **Install**.
- 6 In the **Enter the Number of Dispatch Clients** dialog box, enter the number of dispatch clients that you have purchased. Click **Next**.
- 7 In the **InstallShield Wizard Completed** dialog box, click **Finish**.

Installing the FSA4000 Configuration Tool CAD Interface License

When and where to use:

Follow the procedure below to install the FSA4000 Configurator CAD Interface License

**Note:**

This procedure is optional and must be performed only when CAD is used in the system.

For expansion installation, this procedure is performed only if the FSA4000 Configuration Tool was uninstalled from the previous installation (for example, for IA organizations).

For any ASTRO® 25 System Release 7.4, 7.5, 7.6, 7.7, 7.8 or 7.9 original organizations that do not have a current version of the *FSA4000 CAD API License* media, use the latest available version.

This procedure is optional and must be performed only when CAD is used in the system.

This procedure is for AMC and FSA4000 Aux I/O systems.

This procedure is for new installations, disaster recovery, and expansion.

While performing this procedure, you need to be logged on locally to the AMC as motosec, or Administrator (if motosec is not yet defined).



Note: The User Account Control dialog box may appear. If required, type the administrator user name and password. Click **Continue**, or **Allow**, or **OK**, or **Yes** to continue. Use the username you logged on with as the administrator user name.

Procedure:

- 1 Insert the *FSA4000 CAD API License* media into the optical drive.



Note: If the media does not open automatically, you can navigate to the root directory of the optical drive and double-click *AutoStart.exe*. If one or more security dialog boxes appear, for each dialog box, click **Yes**, or **Run**, or **OK**.

- 2 In the installation home page, click the **FSA4000 CAD API License** or **FSA4000 Configuration Tool - CAD Plug-In** link, and then click the disc icon next to the **FSA4000 CAD API License X.YY** or **FSA4000 Configuration Tool - CAD Plug-In X.YY** entry.

**Note:**

If the Active Content Warning dialog box appears, click **Yes**.

If the Security Warning dialog box appears, click **Run**.

If another Security Warning dialog box appears, click **Run**.

- 3 In the **Welcome** dialog box, click **Next**.
- 4 In the **License Agreement** dialog box, select **I accept the terms in the license agreement**, after reading the License Agreement. Click **Next**.
- 5 In the **Ready to Install the Program** dialog box, click **Install**.
- 6 In the **InstallShield Wizard Completed** dialog box, click **Finish**.

Installing the FSA4000 Configuration Tool Redundant/Dual FEP Option License

When and where to use:

Follow the procedure below to install the FSA4000 Configuration Tool Redundant/Dual FEP Option License.

**Note:**

This procedure is optional and must be performed only when the Redundant FEP option is used in the system.

For upgrade and expansion installation, this procedure is performed only if the FSA4000 Configuration Tool was uninstalled from the previous installation (as done, for example, for IA organizations). •

For any ASTRO® 25 System Release 7.4, 7.5, 7.6, 7.7, 7.8 or 7.9 original organizations that do not have current version of the *FSA4000 Redundant FEP Application License* media, use the latest available version.

While performing this procedure, you need to be logged on locally to the AMC as motosec, or Administrator (if motosec is not yet defined).

The User Account Control dialog box may appear. If required, type the administrator user name and password. Click **Continue**, or **Allow**, or **OK**, or **Yes** to continue. Use the username you logged on with as the administrator user name.

Procedure:

- 1 Insert the *FSA4000 Redundant FEP Application License* media into the optical drive.



Note: If the media does not open automatically, you can navigate to the root directory of the optical drive and double-click **AutoStart.exe**. If one or more security dialog boxes appear, for each dialog box, click **Yes**, or **Run**, or **OK**.

- 2 In the installation home page, click the **FSA4000 Redundant FEP Application License** link, and then click the disc icon next to the **FSA4000 Redundant FEP Application License X.YY** entry.



Note: If an Active Content Warning or a Security Warning dialog box appears, click **Yes**, or **Run**.

- 3 In the **Welcome** dialog box, click **Next**.
- 4 In the **License Agreement** dialog box, select **I accept the terms in the license agreement**, after reading the License Agreement. Click **Next**.
- 5 In the **Ready to Install the Program** dialog box, click **Install**.
- 6 In the **InstallShield Wizard Completed** dialog box, click **Finish**.

Installing the FSA4000 Configuration Tool Apparatus License

When and where to use:

Follow the procedure below to install the FSA4000 Configuration Tool Apparatus license.



Important: This procedure is optional and must be performed only when the Apparatus option is used in the system.

**Note:**

This procedure is for AMC and FSA4000 AUX I/O systems.

For upgrade and expansion installation, this procedure is performed only if the FSA4000 Configuration Tool was uninstalled from the previous installation (as done, for example, for IA organizations).

For any ASTRO® 25 System Release 7.8 or 7.9 original organizations that do not have the current version of the *FSA4000 Apparatus License* media, use the original ASTRO® 25 System Release 7.8 or 7.9 version.

This procedure is for new installations, disaster recovery, and expansion.

While performing this procedure, you need to be logged on locally to the AMC as motosec, or Administrator (if motosec is not yet defined).

The User Account Control dialog box may appear. If required, type the administrator user name and password. Click **Continue**, or **Allow**, or **OK**, or **Yes** to continue. Use the username you logged on with as the administrator user name.

Procedure:

- 1 Insert the *FSA4000 Apparatus License* media into the optical drive.



Note: If the media does not open automatically, you can navigate to the root directory of the optical drive and double-click `AutoStart.exe`. If one or more security dialog boxes appear, for each dialog box, click **Yes**, or **Run**, or **OK**.

- 2 In the installation home page, click the **FSA4000 Apparatus License** link, and then the disc icon next to the **FSA4000 Apparatus License X.YY** entry.



Note: If the Active Content Warning dialog box appears, click **Yes**. If the Security Warning dialog box appears, click **Run**.

- 3 In the **Welcome** dialog box, click **Next**.
- 4 In the **License Agreement** dialog box, select **I accept the terms in the license agreement**, after reading the License Agreement. Click **Next**.
- 5 In the **Ready to Install the Program** dialog box, click **Install**.
- 6 In the **InstallShield Wizard Completed** dialog box, click **Finish**.

Installing the FSA4000 Configuration Tool ARTA License

When and where to use:

Follow the procedure below to install the FSA4000 Configuration Tool ARTA license.

**Important:**

This procedure is optional and must be performed only when the Automatic Voice Talkgroup Assignment option is used in the system.

While performing this procedure, you need to be logged on locally to the AMC as motosec, or Administrator (if motosec is not yet defined).

**Note:**

For upgrade and expansion installation, this procedure is performed only if the FSA4000 Configuration Tool was uninstalled from the previous installation (as done, for example, for IA organizations).

For any ASTRO® 25 System Release 7.8 or 7.9 original organizations that do not have the current version of the *FSA4000 Configuration Tool ARTA License* media, use the original ASTRO® 25 System Release 7.8 or 7.9 version.

The User Account Control dialog box may appear. If required, type the administrator user name and password. Click **Continue**, or **Allow**, or **OK**, or **Yes** to continue. Use the username you logged on with as the administrator user name.

Procedure:

- 1 Insert the *FSA4000 ARTA License* media into the optical drive.



Note: If the media does not open automatically, you can navigate to the root directory of the optical drive and double-click *AutoStart.exe*. If one or more security dialog boxes appear, for each dialog box, click **Yes**, or **Run**, or **OK**.

- 2 In the installation home page, click the **FSA4000 ARTA License** link, and then click the disc icon next to the **FSA4000 ARTA License** entry.



Note: If the Active Content Warning dialog box appears, click **Yes**, or **Run**, or **OK**.

- 3 In the **Welcome** dialog box, click **Next**.
- 4 In the **License Agreement** dialog box, select **I accept the terms in the license agreement**, after reading the License Agreement. Click **Next**.
- 5 In the **Ready to Install the Program** dialog box, click **Install**.
- 6 In the **InstallShield Wizard Completed** dialog box, click **Finish**.

Uninstalling the ACE3600 System Tools Suite (STS)

When and where to use: Follow the procedure below to uninstall the ACE3600 System Tools Suite (STS).

**Note:**

- This procedure is for new installations and disaster recovery (for ASTRO® 25 System Release 7.4, 7.5, 7.6 and 7.7 original organizations).
- While performing this procedure, you need to be logged on locally to the AMC as motosec or Administrator, if motosec is not yet defined.
- The User Account Control dialog box may appear. If required, type the administrator user name and password. Click **Continue** or **Allow** or **OK** or **Yes** to continue. Use the username you logged on with as the administrator user name.

Procedure:

- 1 Log on to the administrator account.

- 2 Open the list of programs:

- If the operating system is Windows 2008, from the **Start** menu, select **Control Panel**. Click **Programs**. Click **Programs and Features**. Click **Uninstall or Change a Program**.
- If the operating system is Windows 2003, select **Start** → **Settings**. Click **Control Panel**. Double-click **Add or Remove Programs**.

- 3 Select the program to uninstall:

- If you are uninstalling on a system which requires Windows Supplemental Configuration, select **Motorola ACE3600 System Tools Suite** from the **Currently installed programs** list.
- If you are uninstalling on a system which does not require Windows Supplemental Configuration, select **STS1050** from the **Currently installed programs** list.

- 4 Click **Remove or Uninstall/Change**.
- 5 If a dialog box appears saying that all applications must be closed, click **Next**.
- 6 If a dialog box saying that the Communication driver is not running and there is nothing to stop, click **OK**.
- 7 Click **Yes** to confirm the uninstall.
- 8 When the **Uninstall Complete** dialog box appears, click **Finish**.
- 9 Close the dialog box.

Installing the ACE3600 System Tools Suite (STS)

When and where to use:

Follow the procedure below to install the ACE3600 System Tools Suite (STS).



Note:

This procedure is for AMC and FSA4000 Aux I/O systems.

While performing this procedure, you need to be logged on locally to the AMC as motosec, or Administrator (if motosec is not yet defined).

The User Account Control dialog box may appear. If required, type the administrator user name and password. Click **Continue**, or **Allow**, or **OK**, or **Yes** to continue. Use the username you logged on with as the administrator user name.

Procedure:

- 1 Insert the *FSA4000 Configuration Application S/W* or *FSA4000 Configuration Application S/W Upgrade* media into the optical drive.



Note:

If the media does not open automatically, you can navigate to the root directory of the optical drive and double-click *AutoStart.exe*.

If one or more security dialog boxes appear, for each dialog box, click **Yes**, or **Run**, or **OK**.

- 2 In the installation home page, click the **ACE3600 System Tools Suite** link, and then click the disc icon next to the **ACE3600 System Tools Suite XX.YY** entry.



Note: If one or more security dialog boxes appear, for each dialog box, click **Yes**, or **Run**, or **OK**.

- Step result:** The InstallShield Wizard dialog box appears.
- 3 Close all STS applications. Click **Next**.
 - 4 In the **Welcome** dialog box, click **Next**.
 - 5 In the **License Agreement** dialog box, click **I accept the terms in the license agreement**, after reading the License Agreement. Click **Next**.
 - 6 In the **User Information** dialog box, do the following:
 - a) In the **Name** field, type a name.
 - b) In the **Company** field, type a name. Click **Next**.
 - 7 In the **Choose Destination Location** dialog box, click **Next**.
 - 8 In the **Ready to Install** dialog box, click **Install**.
 - 9 When the **InstallShield Wizard Complete** dialog box appears, select **Yes, I want to restart my computer now** (if it appears). Click **Finish**.

Step result: Installation is complete.

Installing the ACE3600 System Tools Suite Service Pack

When and where to use:

Follow the procedure below to install the ACE3600 System Tools Suite (STS) Service Pack.



Note:

This procedure is for AMC and FSA4000 Aux I/O systems.

This procedure is for new installations and disaster recovery.

While performing this procedure, you need to be logged on locally to the AMC as motosec, or Administrator (if motosec is not yet defined).

The User Account Control dialog box may appear. If required, type the administrator user name and password. Click **Continue**, or **Allow**, or **OK**, or **Yes** to continue. Use the username you logged on with as the administrator user name.

Procedure:

- 1 Insert the *FSA4000 Configuration Application S/W* or *FSA4000 Configuration Application S/W Upgrade* media into the optical drive.



Note: If the media does not open automatically, you can navigate to the root directory of the optical drive and double-click `AutoStart.exe`. If one or more security dialog boxes appear, for each dialog box, click **Yes**, or **Run**, or **OK**.

- 2 In the installation home page, click the **ACE3600 System Tools Suite** link, and then click the disc icon next to the **ACE3600 System Tools Suite XX.YY SP2** entry.



Note: If one or more security dialog boxes appear, for each dialog box, click **Yes**, or **Run**, or **OK**.

Step result: The InstallShield Wizard dialog box appears.

- 3 Close all STS applications. Click **Next**.
- 4 In the **Welcome** dialog box, click **Next**.
- 5 In the **License Agreement** dialog box, click **I accept the terms in the license agreement**. Click **Next**.
- 6 In the **User Information** dialog box, do the following:
 - a) In the **Name** field, type a name.
 - b) In the **Company** field, type a name. Click **Next**.
- 7 In the **Choose Destination Location** dialog box, click **Next**.
- 8 In the **Ready to Install** dialog box, click **Install**.

Step result: The installation begins.

- 9 In the **InstallShield Wizard Complete** dialog box, clear the **I would like to view the README file** checkbox. Click **Finish**.

Step result: Installation is complete.

Installing the FSA4000 Configuration Tool Upgrade

When and where to use: Follow the procedure below to install the FSA4000 Configuration Tool upgrade.

**Note:**

For upgrade and expansion installation, this procedure is performed only if the FSA4000 Configuration Tool was uninstalled from the previous installation (as done, for example, for IA organizations).

For any ASTRO® 25 System Release 7.4, 7.5, 7.6, 7.7, 7.8, or 7.9 original organizations that do not have the current version of the *FSA4000 Configuration Application S/W* media, use the latest available version.

This procedure is for AMC and FSA4000 AUX I/O systems.

While performing this procedure, you need to be logged on locally to the AMC as motosec, or Administrator (if motosec is not yet defined).

The **User Account Control** dialog box may appear. If required, type the administrator user name and password. Click **Continue**, or **Allow**, or **OK**, or **Yes** to continue. Use the username you logged on with as the administrator user name.

Procedure:

- 1 Insert the *FSA4000 Configuration Application S/W Upgrade* media into the optical drive.



Note: If the media does not open automatically, you can navigate to the root directory of the optical drive and double-click `AutoStart.exe`. If one or more security dialog boxes appear, for each dialog box, click **Yes**, or **Run**, or **OK**.

- 2 In the installation home page, click the **FSA4000 Configuration Tool Upgrade** link, and then click the disc icon next to the **FSA4000 Configuration Tool X.YY Upgrade** entry.

**Note:**

If one or more security dialog boxes appear, for each dialog box, click **Yes**, or **Run**, or **OK**.

If more installations are required a pop-up message window appears, click **Install**.

- 3 In the **Welcome** dialog box, click **Next**.
- 4 In the **License Agreement** dialog box, click **I accept the license agreement**, after reading the License Agreement. Click **Next**.
- 5 In the **Destination Folder** dialog box, click **Next**.
- 6 In the **Ready to Install the Program** dialog box, click **Next**.

Step result: The installation begins.

- 7 If the **Enter the Number of Dispatch Clients** dialog box appears, enter the number of dispatch clients that you have purchased. Click **Next**.
- 8 If a message with information about plug-ins found appears, click **OK**.
- 9 In the **InstallShield Wizard Completed** dialog box, click **Finish**.

Removing Old FSA4000 Configuration Tool Components

When and where to use: Follow the procedure below to remove the old FSA4000 Configuration Tool components.

**Note:**

For new installation and disaster recovery, perform this procedure only for an ASTRO® 25 System Release 7.4, 7.5, 7.6, 7.7 that does not have the current version of the *FSA4000 ALC Client GUI Application License* media, and has a previous version of the FSA4000 Configuration Tool installed.

This procedure is not for ASTRO® 25 System Release 7.8 and 7.9 original organizations.

While performing this procedure, you need to be logged on locally to the AMC as motosec, or Administrator (if motosec is not yet defined).

The User Account Control dialog box may appear. If required, type the administrator user name and password. Click **Continue**, or **Allow**, or **OK**, or **Yes** to continue. Use the username you logged on with as the administrator user name.

Procedure:

- 1 Insert the *FSA4000 Configuration Application S/W Upgrade* media into the optical drive.



Note: If the media does not open automatically, you can navigate to the root directory of the optical drive and double-click `AutoStart.exe`. If one or more security dialog boxes appear, for each dialog box, click **Yes**, or **Run**, or **OK**.

- 2 In the installation home page, click the **FSA4000 Configuration Tool Upgrade** link, and then click the disc icon next to the **Old FSA4000 Configuration Tool Clean Up** entry.
- 3 When the **File Download Security Warning** dialog box appears and prompts you to open or save this file, click **Open**.



Note: If the **Active Content Warning** dialog box appears, click **Yes**. If the **Security Warning** dialog box appears, click **Run**.

- 4 In the **FSA4000 Configuration Tool Clean-up** window, click **Yes**.
- 5 When a message appears saying that all unneeded components were successfully removed, click **OK**.

Installing FSA4000 Core Applications

When and where to use:

Follow the procedure below to install FSA4000 Core Applications.

**Note:**

This procedure is for AMC only and FSA4000 Aux I/O systems.

This procedure is for new installations and disaster recovery.

While performing this procedure, you need to be logged on locally to the AMC as motosec, or Administrator (if motosec is not yet defined).

The User Account Control dialog box may appear. If required, type the administrator user name and password. Click **Continue**, or **Allow**, or **OK**, or **Yes** to continue. Use the username you logged on with as the administrator user name.

Procedure:

- 1 Insert the *FSA4000 Configuration Application S/W* or *FSA4000 Configuration Application S/W Upgrade* media into the optical drive.



Note: If the media does not open automatically, you can navigate to the root directory of the optical drive and double-click `AutoStart.exe`. If one or more security dialog boxes appear, for each dialog box click **Yes**, or **Run**, or **OK**.

- 2 In the installation home page, click the **FSA4000 Core Software** link, and then click the disc icon next to the **FSA4000 Core Software X.YY** entry.



Note: If one or more security dialog boxes appear, for each dialog box, click **Yes**, or **Run**, or **OK**.

- 3 In the **Welcome** dialog box, click **Next**.
- 4 In the **License Agreement** dialog box, click **I accept the license agreement**, after reading the License Agreement. Click **Next**.
- 5 In the **User Information** dialog box, do the following:
 - a) In the **Name** field, type a name.
 - b) In the **Company** field, type a name. Click **Next**.
- 6 In the **Destination Folder** dialog box, click **Next**.
- 7 In the **Ready to Install the Program** dialog box, click **Install**.
- Step result:** The installation begins.
- 8 In the **InstallShield Wizard Completed** dialog box, click **Finish**.

Uninstalling Adobe Reader

When and where to use: Follow the procedure below to uninstall any previous instances of Adobe® Reader® software that may be present on your system before installing Adobe Reader in order to access the customer documentation for the ASTRO® 25 system.

Procedure:

- 1 To log on to the server or client, do the following:
 - a) In the **User name** field, type the appropriate user name.
 - b) In the **Password** field, type the appropriate password. Click **OK**.
- 2 Open the list of programs:
 - If the operating system is Windows 2008 or Windows 7, from the **Start** menu, select **Control Panel**. Click **Programs**. Click **Programs and Features**. Click **Uninstall or Change a Program**. If the Control Panel is in classic view, click **Control Panel Home** first.
 - If the operating system is Windows 2003, select **Start** → **Settings**. Click **Control Panel**. Double-click **Add or Remove Programs**.
 - If the operating system is Windows Vista, from the **Start** menu, click **Control Panel**. Double-click **Programs and Features**.
- 3 In the **Add or Remove Programs/Programs and Features** window, select **Adobe Reader** from the list, and click **Remove** or **Uninstall**.
- 4 If the operating system is Windows Vista or Windows Server 2008, if the User Account Control dialog box appears, click **Allow**, or type in the administrator password for the account displayed, depending on the prompt command, and then click **Yes**.
- 5 Click **Finish**.

Installing Patches from the MOTOPATCH for Windows OS CD

When and where to use:

Follow the procedure below to install MOTOPATCH.



Note: You can run MOTOPATCH again to ensure that all patches are installed on the system. After you run the application for the second time, click **Inventory** to view the list of installed patches.

This requirement does not apply to K-core systems.

The *MOTOPATCH for Windows* CD is a dynamic product with changes each month in response to new security vulnerabilities. Your system was shipped with the latest version of the *MOTOPATCH for Windows* CD available at that time. Make sure to use the latest version of *MOTOPATCH for Windows* CD, and review the *README.txt* file. It may include new information pertaining to your specific system. For information on obtaining the latest version of MOTOPATCH, for any further assistance, contact the Motorola Solution Support Center (SSC).



Important:

Run the *MOTOPATCH for Windows* CD on the Windows client and server devices.

You must upgrade Windows 2008 to SP1, and Windows 7 to SP1, before you can run the *MOTOPATCH for Windows* CD on the Vista client.

See [OS Versions and Matching MOTOPATCH CDs and DVDs on page 110](#) for the list of different OS versions and the matching MOTOPATCH CDs. It helps determine the correct set of MOTOPATCH CDs based on the Windows OS version.

Procedure:

- 1 Close all open applications.
- 2 Insert the appropriate *MOTOPATCH for Windows* CD in the optical drive of the Windows client or server.
- 3 Navigate to the root of the CD.
- 4 Double-click the *MOTOPATCH.exe* file.



Note: If User Account Control (UAC) is enabled on the Windows Server 2008 server or the Windows 7 client, click **Allow** to continue.

- 5 In the **The End User License Agreement** dialog box, click **I Accept**.
- 6 In the **Enter credentials with administrative privileges**, perform the following actions:
 - a) In the **Username** field, type the appropriate username.
 - b) In the **Password** field, type the appropriate password. Click **OK**.
- 7 When the **MOTOPATCH** dialog box appears with information about your system, click **Patch**.

Step result: The installation begins.

- 8 Perform one of the following actions.
 - If a dialog box appears, asking you to reboot now, click **Yes**.
 - If a message appears in the **MOTOPATCH** dialog box that the installation completed successfully and reboot is needed, click **Reboot**.



Caution: Certain patches may require a reboot before they can take effect. Also, some patches may require a secondary patch to be installed after an initial reboot. In this case, the application shows that a reboot is needed. Motorola recommends that you always reboot the computer to ensure proper installation of patches.

- 9 Remove the *MOTOPATCH for Windows* CD from the optical drive. Click **Exit**.

OS Versions and Matching MOTOPATCH CDs and DVDs

The following table shows which versions of MOTOPATCH work with particular OS versions.

Table 11: OS Versions and Matching MOTOPATCH CD/DVD Versions

OS Version	MOTOPATCH CD/DVD
------------	------------------

Table continued...

Windows XP SP3	<ul style="list-style-type: none"> • MOTOPATCH XP SP3 Update • MOTOPATCH for Windows • MOTOPATCH for Windows Third Party Applications
Windows Server 2003 SP2	<ul style="list-style-type: none"> • MOTOPATCH for Windows • MOTOPATCH for Windows Third Party Applications
Windows Vista SP1	<ul style="list-style-type: none"> • MOTOPATCH Vista SP1 Upgrade • MOTOPATCH for Windows • MOTOPATCH for Windows Third Party Applications
Windows Vista SP2	<ul style="list-style-type: none"> • MOTOPATCH Vista SP2 Upgrade • MOTOPATCH for Windows • MOTOPATCH for Windows Third Party Applications
Windows Server 2008 SP1	<ul style="list-style-type: none"> • MOTOPATCH Windows Server 2008 SP1 upgrade CS • MOTOPATCH for Windows • MOTOPATCH for Windows Third Party Applications
Windows 7 SP1	<ul style="list-style-type: none"> • MOTOPATCH Windows 7 SP1 upgrade • MOTOPATCH for Windows • MOTOPATCH for Windows Third Party Applications

Installing MOTODST Locally

When and where to use: Follow the procedure below to install MOTODST locally (a daylight saving time patch).



Note: This requirement does not apply to K-core systems or for FSA4000 client software cohabited on dispatch consoles.

Procedure:

- 1 Log on to the Windows device, with the appropriate administrative username and password.
 - 2 Close all applications on the device, before continuing.
 - 3 Insert the *MOTODST* media into the optical drive and navigate to the drive in the Explorer window.
 - 4 Double-click the MOTODST .exe file.
-
- Note:** If User Account Control (UAC) is enabled on the Windows Server 2008 server, click **Allow** to continue.
- 5 When the software license agreement appears, click the **I agree to the terms and conditions** option, and click **Patch**.
 - Step result:** The installation begins.
 - 6 When a message appears saying that the installation is complete, click **Exit**.
 - 7 When the desktop appears, do the following:
 - a) Open all appropriate applications for this device.

- b) To verify that the installation was successful, open the following log file: C:\MOTOPATCH\install_report_hostname_date_time.txt

Step result: An error code of value 0 or 3010 means the box was successfully patched.

Configuring the InTouch Alarm Printing Option

When and where to use: Follow the procedure below to configure the InTouch alarm printing option.



Note:

This procedure is for new installations and disaster recovery.

This procedure is for FSA4000 Alarm Printing option organizations only.

While performing this procedure, you need to be logged on locally to the AMC as motosec or Administrator, if motosec is not yet defined.

For a description of the FSA4000 Report Generator Alarm Printing Option parameters, see [FSA4000 Report Generator Alarm Printing Options on page 115](#).

Procedure:

- 1 From the Start menu, select **Programs/All Programs** → **Wonderware** → **InTouch** → **Alarm Printer**.
- 2 Perform the following actions:

If...	Then...
If you are performing a new installation, or you are performing disaster recovery when necessary data was not successfully backed up,	<p>do the following:</p> <ol style="list-style-type: none"> 1 Select File → New In this case, the Alarm Printer defaults to Alarm State ALL, Priority 1-999 and Printer Port <none>. 2 Proceed to step 3.
If you are performing an upgrade on a Windows 2008 system,	<p>do the following:</p> <ol style="list-style-type: none"> 1 Select File → Open and select the Alarm Printer Configuration file you want to edit. The Alarm Printer reads the configuration settings from the selected file. 2 Proceed to step 6.
If you are performing an upgrade on a Windows 2003 system, or you are performing disaster recovery when necessary data was successfully backed up. (i.e. no changes in the configuration are required),	<p>do the following:</p> <ol style="list-style-type: none"> 1 Select File → Open and select the Alarm Printer Configuration file you want to use for starting the alarm query. The Alarm Printer reads the configuration settings from the selected file. 2 Proceed to step 15.

**Note:**

The Alarm Printer Configuration files have an .ALC extension.

For upgrades on Windows 2008 systems, the .ALC file is located in the My Documents directory (for the currently logged in user).

For upgrades on Windows 2008 systems, while multiple configuration files exist, all of them must be edited. Edit the configuration file whose name was written down during the backup, after you have completed editing other configuration files.

For upgrades on Windows 2003 systems and for disaster recovery when necessary data was successfully backed up, while multiple configuration files exist, select the configuration file whose name was written down during the backup.

- 3** Select the **Configure** menu.
- 4** In the **Configuration Settings** dialog box, configure the alarm record properties:
 - a) Type the lowest priority alarm value (1 to 999) in the **From Priority** field.
 - b) Type the highest priority alarm value (1 to 999) in the **To Priority** field.
 - c) Select the alarm state from the **Alarm State** list.
 - d) Type the set of InTouch alarm queries to perform in the **Alarm Query** text field.
 - e) Select the **Record alarms generated after query starts** checkbox, to display alarms that are generated after the query starts.
- 5** Select the **Message** tab to activate the Message property sheet and select the options indicated to set the configuration.
- 6** Configure alarm file logging:
 - a) Select the **File Logging** tab.
 - b) Select **Enable Alarm File Logging** to turn on alarm logging.
 - c) Type the complete path:
 - For Windows Server 2003: C:\Program Files\Motorola\PublicSafety\Logs
 - For Windows Server 2008: C:\Program Files (x86)\Motorola\PublicSafety\Logs
- 7** If you are performing an upgrade on the Windows 2008 system, proceed to [step 14](#).
- 8** Configure alarm file logging options:
 - a) Type the number of hours' worth of alarm data to store in each log file in the **Number of Hours to Cycle Filename** field.
 - b) Type the hour to begin the first log in the **Starting at Hour (0-23)** field.
 - c) Type the number of days (before the current day) to store log files in the **Keep Log Files** field. To keep the files indefinitely, type 0 (zero).
 - d) Select the **Remove Trailing Spaces in Log Entries** option, to trim the log entries. A field separator character can also be specified here.
 - e) Select the **Original Column Ordering** option, to preserve the column ordering from the alarm display.
- 9** Configure alarm printing:
 - a) Select the **Printing** tab.
 - b) Select the option for the port connected to the printer used to print reports. The printer used to print alarm status changes should not be used for other printing, as this interferes with the Alarm Printer printing.
 - c) Select the **Remove Trailing Spaces in Printout** checkbox to prevent the printer from printing blank lines or pages at the end of the data.
 - d) Select the **Enable Printing** checkbox to turn on the printing option.
 - e) Select the **Disable Realtime Alarm Printing** option to prevent the system from beginning a new print job every time an alarm activates.
- 10** Select **Port Configuration** to configure a serial port.

- 11 In the **COM# Properties** dialog box, select each field and set the appropriate value for the COM port that is used. Click **OK**.
- 12 If a Windows printer has been selected, click **Browse** to find an available printer.
- 13 In the **Select Printer** dialog box, scroll the list to find the preferred printer, select the printer name, and click **OK**.
- 14 Select **File → Save**.

If...	Then...
If an existing file is being saved (upgrade on Windows 2008),	<p>the Alarm Printer Configuration file is saved.</p> <ol style="list-style-type: none"> 1 Repeat the procedure starting with step 2 for all configuration files (ALC) that were restored. 2 Make sure that the currently open configuration file is the one you want to use for the starting alarm query. Use the configuration file whose name was written down during the backup. 3 Proceed to step 15.
If a new file is being saved on a Windows 2003 based AMC,	<p>In the Save As dialog box, type <code>%UserProfile%\My Documents\%COMPUTERNAME%_query.ALC</code> in the File Name field. Click Save.</p>
If a new file is being saved on a Windows 2008 based AMC,	<p>In the Save As dialog box, type <code>%UserProfile%\Documents\% COMPUTERNAME%_query.ALC</code> in the File Name field. Click Save.</p>

- 15 Select **Start/Stop** to start or stop an alarm query while the Alarm Printer is running on the **Query** menu.

Step result: The color of the appropriate field is changed.

- 16 Select **File → Exit**.

- 17 Do the following:

- If you are performing a new installation, then proceed to [step 18](#).
- If the Alarm Printer query batch files do not exist, then proceed to [step 18](#).
- Otherwise, this procedure is complete

- 18 Open Notepad:

- If the operating system is Windows 2008, open the **Start** menu and type **Notepad** in the **Search Bar**. Press **Enter**.
- If the operating system is Windows 2003, press the **Windows icon key + R**, in the **Run** dialog box and type **Notepad** in the **Open** field. Click **OK**.

- 19 Enter the command in the ALC file, typed in as a single line, including the quotation marks:

- If the operating system is Windows 2008, type:
`"%Program- Files (x86)%\Wonderware\In-Touch\ALMPRT.EXE" "%UserProfile%\Documents\%COMPUTERNAME%_query.ALC"`
- If the operating system is Windows 2003, type:
`"%ProgramFiles%\Wonderware\ InTouch\ALMPRT.EXE" "%UserProfile%\My Documents\%COMPUTERNAME%_query.ALC"`



Note: ... \%COMPUTERNAME%_query.ALC is the name of the Alarm Printer Configuration file that was saved in [step 14](#), and the name of the Alarm Printer Configuration file that the Alarm Printer will start with.

- 20 Save the file:

- a) Select **File → Save As**.
- b) Type the file name **OpenAlarmPrinter-Query.bat** in the **File Name** field and click **Save**.

- If the operating system is Windows 2008, the file name is %UserProfile%\Documents\OpenAlarmPrinter-Query.bat.
 - If the operating system is Windows 2003, the file name is %UserProfile%\My Documents\OpenAlarmPrinter-Query.bat.
- c) Select **File** → **Exit** to close Notepad.
- 21** To prevent the loss of any query data due to a system being inadvertently shut down and restarted, create a batch file which launches the Alarm Printer and runs an automatic query:
- a) Open Notepad and enter the query text, typed in as a single line:
 - If the operating system is Windows 2008, type:
"%Program- Files (x86)%\Wonderware\In-Touch\ALMPRT.EXE" -q "%UserProfile%\Documents\%COMPUTERNAME%_query.ALC"
 - If the operating system is Windows 2003, type:
"%ProgramFiles%\Wonderware\ InTouch\ALMPRT.EXE" -q "%UserProfile%\My Documents\%COMPUTERNAME%_query.ALC"
-  **Note:** %COMPUTERNAME%_query.ALC is the name of the Alarm Printer Configuration file that was saved in [step 14](#), and the name of the Alarm Printer Configuration file that the Alarm Printer will start with. By using the -q in the command, the query runs automatically when the system starts up.
- b) Select **File** → **Save As**.
 - c) Type the file name in the **File Name** field and click **Save**.
 - If the operating system is Windows 2008, the file name is %UserProfile%\Documents\RunAlarmPrinter-Query.bat.
 - If the operating system is Windows 2003, the file name is %UserProfile%\My Documents\RunAlarmPrinter-Query.bat.
 - d) Select **File** → **Exit**.

FSA4000 Report Generator Alarm Printing Options

Table 12: FSA4000 Report Generator Alarm Printing Options

Option	Description
Date	To print the alarm date.
Time	To print the alarm time.
Order of alarms	To set the order that alarms are sorted in the alarm record.
Alarm State	To print the alarm state.
Alarm Class	To print the alarm class.
Alarm Type	To print the alarm type.
Priority	To print the alarm priority.
Remove Trailing Spaces	To remove the extra trailing spaces from a printed field when the length of the actual field value is less than what was configured for that field.
Alarm Name	To print the alarm name (tagname).
Group Name	To print the alarm group name.
Alarm Provider	To print the name of the alarm provider.

Table continued...

Value at Alarm	To print the value of the tagname.
Limit	To print the tagname's alarm limit.
Operator Node	To print the operator node associated with the alarm condition.
Operator Name	To print the operator name associated with the alarm condition.
Comment	To print the alarm comment associated with the tagname.
User1	To print the numerical values of User Defined Number 1 corresponding to the alarm.
User2	To print the numerical values of User Defined Number 2 corresponding to the alarm.
User3	To print the string value of the user-defined string property associated with the alarm.

Re-Configuring Wonderware InTouch Alarm DB Logger

When and where to use:

Follow the procedure below to re-configure the Wonderware InTouch alarm DB logger.



Note:

While performing this procedure, you need to be logged on locally to the AMC as motosec, or Administrator (if motosec is not yet defined).

This procedure is for systems with FSA4000 Alarm Printing option only.

The User Account Control dialog box may appear. If required, type the administrator user name and password. Click **Continue**, or **Allow**, or **OK**, or **Yes** to continue. Use the username you logged on with as the administrator user name.

Procedure:

- 1 From the Start menu, select **Programs/All Programs** → **Wonderware** → **InTouch** → **Alarm DB Logger Manager**.
- 2 In the **Alarm DB Logger Manager** dialog box, click **Settings**.
- 3 In the **Alarm DB Logger Manager – Configuration** dialog box, type the new complex password for the wwAdmin SQL login in the **Password** field. Refer to the Accounts Passwords list for the default password.

Note: The password field displays only 13 characters but a longer password may be used.
- 4 Click **Test Connection**.
 - If the dialog box indicates that the test was successful, click **OK**.
 - If a message appears that the connection failed, correct the data entered in *step 3* and click **Test Connection** again.
- 5 Click **Next**.
- 6 In the **Alarm DB Logger Query Selection** dialog box, click **Next** to accept the defaults.
- 7 In the **Alarm DB Logger Advanced Settings** dialog box, in the **Running Logger As** selection area, select the preferred option and click **Finish**.
 - If the operating system is Windows Server 2003, select the **Windows Service** option.
 - If the operating system is Windows Server 2008, select the **Normal Application** option.
- 8 In the **Alarm DB Logger Manager** dialog box, click **Start**.

- 9 Minimize the **Alarm DB Logger Manager** window.

Configuring the MDLC Formatted Buffer Size for the FSA4000 Configuration Tool

Prerequisites: Before performing this procedure, make sure that the System Tools Suite (STS) application is not running.

When and where to use:

Follow the procedure below to configure the MDLC formatted buffer size for the FSA4000 Configuration Tool.



Note:

Perform this procedure for FSA4000 systems with the Apparatus function.

While performing this procedure, you need to be logged on locally to the AMC as motosec, or Administrator (if motosec is not yet defined).

The FSA4000 Configuration Tool project should already be created before this procedure.

The User Account Control dialog box may appear. If required, type the administrator user name and password. Click **Continue**, or **Allow**, or **OK**, or **Yes** to continue. Use the username you logged on with as the administrator user name.

Procedure:

- 1 If the System Tools Suite MDLC communication driver is running, select **Start → Programs/All Programs → Motorola ACE3600 System Tools Suite XX.YY → Stop MDLC communication Driver** and click **OK**.
- 2 To start the FSA4000 Configuration Tool, from the **Start** menu, select **Programs/All Programs → Motorola → FSA4000 Configuration Tool X.YY → FSA4000 Configuration Tool**.

Step result: The FSA4000 Configuration application opens on the screen.

- 3 Open an existing project:

If...	Then...
If the preferred project appears in the Recent projects pane,	click the link of the project name in the Recent projects pane.
If the preferred project does not appear in the Recent projects pane,	<p>do the following:</p> <ol style="list-style-type: none"> 1 Select File → Open. 2 Browse to the preferred project directory. <ul style="list-style-type: none"> • The default location of the project directory on Windows Server 2003 is: C :\Program Files\Motorola\ PublicSafety\Fire\FSA4000 \FSA4000_xxx\Projects\"project name"\. • The default location of the project directory on Windows Server 2008 is: C :\Program Files (x86)\Motorola\PublicSafety\Fire \FSA4000\FSA4000_xxx\Projects\"project name" 3 Select the preferred project name (.sap file) and click Open. <p> Note: If an upgrade is needed, a dialog box appears, asking if you want to perform the upgrade. Click Yes.</p>

Step result: The selected project appears on the screen.

- 4 Click the **Download Files** link in the **Project** pane.

Step result: The Download Files details appear.

- 5 To update the MDLC packet size, do the following:
 - a) Note the **Unit MDLC Packet Size** value.
 - b) Click **COM Setup**.
 - c) In the **Communication Setup** dialog box, click **More**.
 - d) If necessary, change the **Formatted buffer size (bytes)** value to match the **Unit MDLC Packet Size** value. Click **OK**.
- 6 Select **File → Save**.
- 7 Select **File → Exit**.

Configuring the FSA4000 Alerting Center Computers

When and where to use:

Follow the procedure below to configure the AMCs for the FSA4000 Alerting Center by associating each AMC in the Alerting Center with an FSA4000 computer name.



Note:

For disaster recovery, perform this procedure only if the FSA4000 Dispatch Software configuration cannot be restored. See [Restoring the FSA4000 Dispatch Software Configuration on page 193](#).

While performing this procedure, you need to be logged on locally to the AMC as motosec, or Administrator (if motosec is not yet defined), or to the ALC and consoles as secmoto.

Procedure:

- 1 Open the configuration file:

- On Windows Server 2008 or Windows 7, open: C:\Program Files (x86)\Motorola\PublicSafety\Fire\Dispatch\FSA4000_InTouch\Data\ComputerNames.ini
- On Windows Server 2003 and Windows Vista, open: C:\Program Files\Motorola\PublicSafety\Fire\Dispatch\FSA4000_InTouch\Data\ComputerNames.ini

- 2 Type a name for the AMC computer in the **SERVER_NAME** field (for example, Z001NMD001AMC01), in order for the server application to run on the AMC.



Note: If dispatch capability is also required on the AMC computer, type a name for the AMC computer in the **PC01** field, under **[COMPUTER_NAME]**.

- 3 If AMC Redundancy is configured, type a name of the AMC computer used as a secondary server in the **SECONDARY_SERVER_NAME** field (for example, Z001NMD001AMC02).

- 4 Assign a name to each ALC (for example, Z001NMD001ALC01), to a **PCxx** entry in the file (up to 40), based on the number of client licenses purchased for the Alerting Center.



Note:

If **PC01** is assigned to the AMC (server application with dispatch capability), only 39 additional ALC computers can be added.

If the Alerting Center includes less than 40 computers with dispatch capabilities, erase the extra **PCxx** entries.

- 5 Save the ComputerNames.ini file.
- 6 Repeat this procedure in the ComputerNames.ini file on each AMC/ALC in the Alerting Center.

Configuring the FSA4000 Apparatuses

When and where to use:

Follow the procedure below to configure the FSA4000 Apparatuses.



Note:

This procedure is for AMC and FSA4000 AUX I/O systems.

Perform this procedure in case of FSA4000 Apparatuses expansion.

While performing this procedure, you need to be logged on locally to the AMC as motosec, or Administrator (if motosec is not yet defined).

Procedure:

- 1 To start the FSA4000 Configuration Tool, from the **Start** menu, select **Programs/All Programs → Motorola → FSA4000 Configuration Tool X.YY → FSA4000 Configuration Tool**.
- 2 To open an existing project, perform the following actions:

If...	Then...
If the preferred project appears in the Recent projects pane,	click the link with the project name in the Recent projects pane.
If the preferred project does not appear in the Recent projects pane,	<p>perform the following actions:</p> <ol style="list-style-type: none"> 1 Select File → Open. 2 In the Open FSA4000 Configuration Project dialog box, browse to the preferred project directory. 3 Select the preferred project name (.sap file). Click Open.

Step result: The selected project appears on the screen.

- 3 To define FSA4000 Apparatuses, perform the following actions:
 - a) Click the **Define Stations Layout** link in the **Project** pane.
 - b) Select the **Apparatus feature enabled** checkbox in the **Apparatus** pane.
 - c) Select the **Apparatuses** tab in main window.
 - d) Define the Apparatuses according to the “Defining the Station Layout” section of the *FSA4000 Configuration User Guide*.



Note:

To open the *FSA4000 Configuration Tool User Guide*, from the **Start** menu, select **Programs/All Programs → Motorola → FSA4000 Configuration Tool X.YY → FSA4000 Configuration Tool User Guide**.

- 4 Select **File → Save**.
- 5 Select **File → Exit**.

Configuring the FSA4000 Auto Remote Talkgroup Assignment (ARTA)

When and where to use:

Follow the procedure below to configure the FSA4000 Auto Remote Talkgroup Assignment feature.

**Note:**

Perform this procedure only for FSA4000 ARTA expansion.

While performing this procedure, you need to be logged on locally to the AMC as motosec, or Administrator (if motosec is not yet defined).

The FSA4000 Configuration Tool project should be created before performing this procedure

Procedure:

- 1 To start the FSA4000 Configuration Tool, from the **Start** menu, select **Programs/All Programs → Motorola → FSA4000 Configuration Tool X.YY → FSA4000 Configuration Tool**.
- 2 To open an existing project, perform one of the following actions:

If...	Then...
If the preferred project appears in the Recent projects pane,	click the link with the project name in the Recent projects pane.
If the preferred project does not appear in the Recent projects pane,	<p>perform the following actions:</p> <ol style="list-style-type: none"> 1 Select File → Open. 2 In the Open FSA4000 Configuration Project dialog box, browse to the preferred project directory. 3 Select the preferred project name (.sap file). Click Open.

Step result: The selected project appears on the screen.

- 3 To configure Auto Remote Group Assignment, perform the following actions:
 - a) Click the **Define Network** link in the **Project** pane.
 - b) Click the **Talkgroups** tab.
 - c) Select the **Auto Remote Talkgroup Assignment** checkbox.
 - d) Define the Talkgroups according to the “Defining the Station Layout” section of the *FSA4000 Configuration Tool User Guide*.



Note: To open the *FSA4000 Configuration Tool User Guide*, from the **Start** menu, select **Programs/All Programs → Motorola → FSA4000 Configuration Tool X.YY → FSA4000 Configuration Tool User Guide**.

- 4 If the Battalion Chief utility (which is not supported in the ARTA feature) is enabled, disable it:
 - a) Click **Define Stations Layout** in the **Project** pane.
 - b) Click the **Battalion Chief** utility in the **Utilities** pane.
 - c) Change the **Active** property to **No**.
- 5 Select **File → Save**.
- 6 Select **File → Exit**.

Creating the CSV File

When and where to use:

Follow the procedure below to create the CSV file.

**Note:**

This procedure is for AMC only.

While performing this procedure, you need to be logged on locally to the AMC as motosec, or Administrator (if motosec is not yet defined).

The User Account Control dialog box may appear. If required, type the administrator user name and password. Click **Continue**, or **Allow**, or **OK**, or **Yes** to continue. Use the username you logged on with as the administrator user name.

Procedure:

- 1 To start the FSA4000 Configuration Tool, from the **Start** menu, select **Programs/All Programs → Motorola → FSA4000 Configuration Tool X.YY → FSA4000 Configuration Tool**.

Step result: The FSA4000 Configuration application opens on the screen.

- 2 Open the project:

- a) Select **File → Open**.



Note: If upgrade is needed, a dialog box appears, asking if you want to perform the upgrade. Click **Yes**.

- b) Navigate to the directory that contains the project, and select the **.sap** file. Click **Open**.

- 3 Confirm that the project is correct:

- a) Verify that the project includes all the FEPs or RTUs.
- b) Verify the configuration.

- 4 Select **File → Save**.

Step result: The project is saved under the same volume.

- 5 Build the project:

- a) Select **Download Files** from the **Project** pane on the left.
- b) Select **Build** from the **Activities** pane on the left.

Step result: The InTouch tags file (csv) is built.

Loading the FSA4000 InTouch Database

When and where to use:

Follow the procedure below to load the FSA4000 InTouch Database.



Note: While performing this procedure, you must be logged on locally to the AMC as motosec, or Administrator (if motosec is not yet defined), or to the ALC and consoles as secmoto.

This procedure can be performed when upgrading/installing an ALC (client) only after the AMC (server) to which the ALC belongs is already configured.

For disaster recovery, this procedure is only performed if the FSA4000 Configuration Tool project was not backed up.

The User Account Control dialog box may appear. If required, type the administrator user name and password. Click GMC/GWS for MOSCAD NFM to continue. Use the username you logged on with as the administrator user name.

Procedure:

- 1 If you are using this procedure on the ALC, copy the **IntouchDB.csv** file from the AMC to the ALC.

- If you are on Windows Server 2008, copy the file from the following location on the AMC: **C:\Program Files (x86)\Motorola\PublicSafety\Fire\FSA4000\FSA4000_xxx\Projects\project_name>\IntouchDB.csv**.

- If you are on Windows Server 2003, copy the file from the following location on the AMC: C:\Program Files (x86)\Motorola\PublicSafety\Fire\FSA4000\FSA4000_xxx\Projects\project_name>\IntouchDB.csv.



Note: The IntouchDB.csv file can be copied to any folder on the ALC. Remember the location to which you copy the IntouchDB.csv file for use in *step 6*.

- 2 To open the Wonderware InTouch Application Manager, select **Start → Programs/All Programs → Wonderware → Intouch**.



Note: If the User Account Control dialog box appears, type the administrator user name and password, and click **Yes**.

- 3 If the InTouch application is run for the first time, do the following:
 - a) When the InTouch Application Manager displays a message that this is the first time it is being run, click **Next**.
 - b) When you are prompted to select a starting directory, navigate to the correct folder, and click **OK**.
 - If the operating system is Windows Server 2003, the folder is C:\Program Files\motorola\publicsafety\fire\dispatch\fsa4000_intouch.
 - If the operating system is Windows Server 2008, the folder is C:\Program Files (x86)\motorola\publicsafety\fire\dispatch\fsa4000_intouch.
 - c) Click **Finish**.
- 4 In the Application Manager, select the required entry and select **File → DBLoad**.



Note: If the entry does not exist, select **Tools → Find Applications**, navigate to the fsa4000_intouch folder, and click **OK**.

- 5 When a prompt appears to save a backup of the existing application, click **Yes**.
- 6 In the **CSV File to Load From** dialog box, browse to the folder where the IntouchDB.csv file resides, and select the IntouchDB.csv file that was generated by the FSA4000 Configuration tool.



Note:

On the AMC, the IntouchDB.csv file resides under the project folder.

On the ALC, the IntouchDB.csv file resides under the folder selected in *step 1* of this procedure.

- 7 Click **OK**. Wait until a message appears stating that the load was successful.
- 8 Step result: The database definition is loaded.
- 8 Repeat this procedure for each computer.

Configuring the MDLC Formatted Buffer Size for the ACE3600 STS

Prerequisites: You must create the FSA4000 Configuration Tool project before this procedure is executed.

When and where to use:

Follow the procedure below to configure the MDLC formatted buffer size for the ACE3600 STS.

**Note:**

Perform this procedure for FSA4000 Apparatuses expansion.

While performing this procedure, you need to be logged on locally to the AMC as motosec, or Administrator (if motosec is not yet defined).

The User Account Control dialog box may appear. If required, type the administrator user name and password. Click **Continue** or **Allow** or **OK** or **Yes** to continue. Use the username you logged on with as the administrator user name.

Procedure:

- 1 To start the FSA4000 Configuration Tool, from the **Start** menu, select **Programs/All Programs → Motorola → FSA4000 Configuration Tool X.YY → FSA4000 Configuration Tool**.

Step result: The FSA4000 Configuration application opens on the screen.

- 2 To open an existing project, perform one of the following actions:

If...	Then...
If the preferred project appears in the Recent projects pane,	click the link with the project name in the Recent projects pane.
If the preferred project does not appear in the Recent projects pane,	<p>perform the following actions:</p> <ol style="list-style-type: none"> 1 Select File → Open. 2 In the Open FSA4000 Configuration Project dialog box, browse to the preferred project directory. 3 Select the preferred project name (.sap file). Click Open.

Step result: The selected project appears on the screen.

- 3 Click the **Download Files** link in the **Project** pane.

Step result: The **Download Files** details appear.

- 4 Record the **Unit MDLC Packet Size** value.



Note: The value is used in the Motorola ACE3600 System Tools Suite application.

- 5 Select **File → Exit**.



Note: If a dialog box appears and asks if you want to save changes in the project, click **No**.

- 6 To stop the MDLC Communication Driver, select **Start → Programs/All Programs → Motorola ACE3600 System Tools Suite XX.YY → Stop MDLC Communication Driver**. Click **OK**.

- 7 To start the MDLC Communication Setup, select **Start → Programs/All Programs → Motorola ACE3600 System Tools Suite XX.YY → MDLC Communication Setup**.



Note: If the User Account Control dialog box appears, type the administrator user name and password, and click **Yes**.

- 8 In the **ACE3600 STS Communication Setup** dialog box, click **More**.

- If the value in the **Formatted buffer size (bytes)** is the same as the **Unit MDLC Packet Size** recorded in [step 4](#), click **Cancel**.
- If the value in the **Formatted buffer size (bytes)** is not the same as the **Unit MDLC Packet Size** recorded in [step 4](#), change the formatted buffer size (bytes) value to the **Unit MDLC Packet Size** value from [step 4](#). Click **OK**.

Step result: The Communication Setup dialog box closes.

Configuring the Local Hosts File

When and where to use:

Follow the procedure below to configure the local hosts file.



Note:

For disaster recovery, perform this procedure only if you were previously unable to back up necessary data.

For disaster recovery on the AMC, MCC 7500 Dispatch Console and CENTRACOM Gold Elite Dispatch Console with FSA4000 client software cohabitation.

For New Installation on the AMC, ALC, or on the MCC 7500 Dispatch Console and CENTRACOM Gold Elite Dispatch Console with FSA4000 client software cohabitation.

This procedure is for K-core systems only.

While performing this procedure, you need to be logged on locally to the AMC as motosec or Administrator, if motosec is not yet defined, or to the ALC and consoles as secmoto.

The User Account Control dialog box may appear. If required, type the administrator user name and password. Click **Continue** or **Allow** or **OK** or **Yes** to continue. Use the username you logged on with as the administrator user name.

Procedure:

- 1 Open the hosts file:
 - a) Select **Start → Programs/All Programs → Accessories**.
 - b) On Windows 2003, select **Notepad**. On Windows 2008, right-click on **Notepad** and select **Run as administrator**.
 - c) Select **File → Open**.
 - d) Type the following in the **File name** field:
%SystemRoot%\system32\drivers\etc\hosts
 - e) Click **Open**.
- 2 Proceed as follows:

If...	Then...
If this is disaster recovery of the MCC 7500 Dispatch Console or CENTRACOM Gold Elite Dispatch Console,	at the end of the file, add the information from the backed up hosts file stored in the backup location. The information should be added in format: IP Address> Host Name>
If this is not disaster recovery of the MCC 7500 Dispatch Console or CENTRACOM Gold Elite Dispatch Console,	do the following: <ol style="list-style-type: none"> 1 Add the following line to the end of the file: IP Address of This Computer> Host name of this computer> 2 Add the following line to the end of the file: IP Address of Server> Host name of Server> 3 Add a similar line for every server in the system that this client is connected to.

**Note:**

The IP address and the host name should be separated by at least one space.

The server host name is **csYYIXXXamcNN.domain name>**

The client host name is **csYYIXXXalcNN.domain name>**

YY is the Conventional Subsystem number**XXX** is the Conventional Location number**NN** is the Server/Client number**domain name>** is the client domain name, as it appears in the computer system properties window (right-click on the **Computer** on the **Start** menu, and select **Properties**).

- 3 Select **File → Save**.
- 4 Select **File → Exit**.

Configuring Network Time Protocol (NTP)

When and where to use:

Follow the procedure below to configure NTP (Network Time Protocol).

**Note:**

For disaster recovery on the AMC and ALC, perform this procedure only if you were previously unable to back up necessary data.

For New Installation on the AMC and ALC.

This procedure is for K-core systems only.

Applicable only if a third-party NTP time source is available.

While performing this procedure, you need to be logged on locally to the AMC as motosec, or Administrator (if motosec is not yet defined), or to the ALC as secmoto.

The User Account Control dialog box may appear. If required, type the administrator user name and password. Click **Continue**, or **Allow**, or **OK**, or **Yes** to continue. Use the username you logged on with as the administrator user name.

Procedure:

- 1 Open the **Date and Time** window:

- If the operating system is Windows 2008, from the **Start** menu, select **Control Panel**. Click **Clock, Region and Language**. Click **Date and Time**.
- If the operating system is Windows 7, from the **Start** menu, click **Control Panel**. Click **Clock, Language, and Region**, and click **Date and Time**. If the Control Panel is in classic view, click **Control Panel Home** first.
- If the operating system is Windows Vista, from the **Start** menu, click **Control Panel**. Double-click **Date and Time**. If the Control Panel is in classic view, click **Control Panel Home** first.

- 2 In the **Date and Time** window, select the **Internet Time** tab. On all operating systems except Windows 2003, click **Change settings....**



Note: If the User Account Control dialog box appears, click **Continue**, or provide the administrator user name and password and click **Yes**.

- 3 In the **Internet Time Settings** window, check the **Synchronize with an Internet time server** checkbox.

Step result: The **Server** drop-down list is enabled.

- 4 Type the IP address of the ntp02.zone1 server in the **Server** field.

- 5 Click **OK**.

- 6 Click **OK**.

Step result: The **Date and Time** window closes.

Starting the FSA4000 Dispatch Software

Prerequisites: Before logging in, contact the system administrator and record the user name, password, and domain information.

When and where to use:

Follow the procedure below to start the FSA4000 Dispatch Software and log on to the GUI.



Note: While performing this procedure, you need to be logged on locally to the AMC as motosec, or Administrator (if motosec is not yet defined), or to the ALC and consoles as secmoto.



Note: The User Account Control dialog box may appear. If required, type the administrator user name and password. Click **Continue**, or **Allow**, or **OK**, or **Yes** to continue. Use the username you logged on with as the administrator user name.

Procedure:

- 1 Reboot the computer.
 - 2 Double-click the **FSA4000 Dispatch Software** icon on the desktop.
- Step result:** The **FSA4000 Dispatch GUI Login** window appears.
- 3 Log on:
 - a) In the **FSA4000 Dispatch GUI Login** window, click **User Name**.
 - b) Using the virtual keyboard, type the user name in the **User Name** field.
 - c) Click **Password**.
 - d) Using the virtual keyboard, type the password in the **Password** field. Click **OK**.
 - 4 Enter the domain name:
 - a) In the **FSA4000 Dispatch GUI Login** window, click **Log on to**.
 - b) Using the virtual keyboard, type the host/computer name that runs the InTouch application (with no DNS domain name added.)
 - c) Click **Send**.

Switching the AMC to the Redundant FSA4000 FEP

When and where to use:

Follow the procedure below to switch the AMC to the redundant FSA4000 FEP.



Note: This procedure is performed only when the Redundant FSA4000 FEP option is used.

Procedure:

- 1 Select **Station Information** from the FSA4000 Dispatch Software top menu.
 - 2 In the **Station Information** pane, click **FEP Communications**.
- Step result:** The **FEP Communications** details appear.
- 3 Click the pink oval switch with the white arrow.
 - 4 When a message prompts you to confirm the switch to the Secondary FEP, click **Yes**.

Step result: The AMC is switched to the Secondary FEP.

Switching the AMC to the Main FSA4000 FEP

When and where to use:

Follow the procedure below to switch the AMC to the main FSA4000 FEP.



Note: This procedure is performed only when the Redundant FSA4000 FEP option is used.

Procedure:

- 1 Select **Station Information** from the FSA4000 Dispatch Software top menu.
- 2 In the **Station Information** pane, click **FEP Communications**.
Step result: The **FEP Communications** details appear.
- 3 Click the pink oval switch with the white arrow.
- 4 When a message prompts you to confirm the switch to the Primary FEP, click **Yes**.
Step result: The AMC is switched to the Primary FEP.

ALC Installation

ALC installation involves installing all necessary applications on an ALC. See [Installing ALCs on page 127](#).

If the FSA4000 client software coexists on consoles, the client software must be installed on the consoles. See [Recovering FSA4000 Client Software Cohabitation on a Console on page 200](#).

Installing ALCs

When and where to use: Follow the process below to install the ALC. To install FSA4000 Client Software to coexist on consoles, see [Installing the FSA4000 Client Software to Coexist on a Console on page 129](#).



Note: The logon username used in the ALC installation process is secmoto.

Process:

- 1 Install the operating system using MOSI. See [Installing Windows Server Using MOSI on page 74](#).
 - If the system uses the Windows Vista operating system, install Microsoft Windows Vista Business Edition with SP2.
 - If the system uses the Windows 7 operating system, install Microsoft Windows 7 with SP1.
- 2 Rename the administrative account. See [Renaming the Administrative Account on page 89](#).
- 3 Configure the Windows operating system. See [Configuring the Windows Operating System on page 77](#).
- 4 Install Wonderware InTouch. See [Installing Wonderware InTouch on page 84](#).
- 5 Install the Wonderware InTouch license file. See [Installing the Wonderware InTouch License on page 85](#).
- 6 Install the FSA4000 users and groups. See [Installing FSA4000 Users and Groups on page 90](#).
- 7 Install the InTouch configuration. See [Installing the InTouch Configuration on page 91](#).
- 8 Install the FSA4000 Dispatch Software. See [Installing the FSA4000 Dispatch Software Application on page 93](#).
- 9 Install the FSA4000 Report Generator. See [Installing the FSA4000 Report Generator on page 96](#).
- 10 Install the Event Logging Client using the Windows Install Framework application. Refer to the *Centralized Event Logging* manual.
- 11 In Dynamic System Resilience systems, or when ZCP exists, configure the Windows Event Logging Client. Refer to the “Configuring Windows Event Logging Clients” section of the *Centralized Event Logging* manual.
Note: This step is not applicable for K-core systems or FSA4000 client software cohabited on dispatch consoles.
- 12 Install the Adobe Reader application by following the instructions provided with the ASTRO® 25 system documentation media.

**Note:**

Your system must have Adobe® Reader® and a web browser installed to access the documentation.

If you need to remove any previous instances of Adobe Reader before installing the current version of the application, then perform [Uninstalling Adobe Reader on page 109](#).

- 13 Start NetMeeting. Refer to the “Starting NetMeeting on Windows Server 2003 and Windows XP SP1-2” section of the *Windows Supplemental Configuration* manual.



Note: This step is not applicable for FSA4000 client software cohabited on dispatch consoles.

- 14 If required by your organization's policies, set the boot order. (Contact your system administrator for guidance). Refer to the “Setting the Boot Order for Windows Devices (Not for Virtual Machines)” section in the *Windows Supplemental Configuration* manual.



Note: This step is not applicable for K-core systems or for FSA4000 client software cohabited on dispatch consoles.

- 15 Install MOTOPATCH. See [Installing Patches from the MOTOPATCH for Windows OS CD on page 109](#).

**Note:**

This requirement does not apply to K-core systems.

Make sure all MOTOPATCH CDs are included, for:

- Operating system software
- SP1 upgrade CD for Windows 7
- Third-party applications

OS patching must be performed after patching third-party applications.

- 16 Install MOTODST locally. See [Installing MOTODST Locally on page 111](#).

- 17 Install the Windows operating system configuration. Refer to “Applying Device-Specific Settings Using the Windows Supplemental CD” section in the *Windows Supplemental Configuration* manual.



Note: The procedure is obligatory for K-core systems.

For all other systems, you may decide not to perform this procedure, to avoid the lengthy reboot time. However, it must be acceptable within your organization's policy to rely on the configuration being provided by Group Policy Objects on the domain controllers.

- 18 Change the default Windows logon banner locally to customize it for your organization. Refer to “Changing Logon Banners Locally” in the *Windows Supplemental Configuration* manual.

- 19 Configure the Alerting Center Computers. See [Configuring the FSA4000 Alerting Center Computers on page 118](#).

- 20 Configure the local hosts file. See [Configuring the Local Hosts File on page 124](#).

- 21 Configure NTP. See [Configuring Network Time Protocol \(NTP\) on page 125](#).

- 22 Load the FSA4000 InTouch Database. See [Loading the FSA4000 InTouch Database on page 121](#).

- 23 Join the device to the domain. Refer to “Joining and Rejoining a Windows-Based Device to an Active Directory Domain Using a Script” in the *Authentication Services* manual.

- 24 Start the FSA4000 Dispatch Software. See [Starting the FSA4000 Dispatch Software on page 126](#).

Configuring Window Color and Appearance

When and where to use: Follow the procedure below to configure window color and appearance on Windows Vista.

**Note:**

Windows must be activated before performing this procedure.

This procedure is for Windows Vista systems only.

While performing this procedure, you need to be logged on locally to ALC as secmoto.

The User Account Control dialog box may appear. If required, type the administrator user name and password. Click **Continue** or **Allow** or **OK** or **Yes** to continue. Use the username you logged on with as the administrator user name.

Procedure:

- 1 Right-click on the desktop and select **Personalize**.
- 2 Click **Window Color and Appearance**.
- 3 Select **Open Classic appearance properties for more color options**.
- 4 In the **Appearance Settings** dialog box, in the color scheme, make sure that **Windows Aero** is selected, and press **Effects**.
- 5 Make sure that the checkbox is chosen for **Use the following method to smooth edges of screen fonts**.
- 6 Select **Standard** and click **OK**.
- 7 Click **OK**.
- 8 Close the **Personalize** window.

Installing the FSA4000 Client Software to Coexist on a Console

When and where to use: Follow the procedure below to install the FSA4000 Client software to coexist on consoles.

**Note:**

The log on username used when installing the FSA4000 Client software is secmoto.

This procedure assumes that the Windows OS is already installed on the console.

Process:

- 1 Configure the Windows operating system. See *Configuring the Windows Operating System on page 77*.
- 2 Install Wonderware InTouch. See *Installing Wonderware InTouch on page 84*.
- 3 Install the Wonderware InTouch license file. See *Installing the Wonderware InTouch License on page 85*.
- 4 Install the FSA4000 users and groups. See *Installing FSA4000 Users and Groups on page 90*.
- 5 Install the InTouch configuration. See *Installing the InTouch Configuration on page 91*.
- 6 Install the FSA4000 Dispatch Software. See *Installing the FSA4000 Dispatch Software Application on page 93*.
- 7 Install the FSA4000 Report Generator. See *Installing the FSA4000 Report Generator on page 96*.
- 8 Install the Adobe Reader application by following the instructions provided with the ASTRO® 25 system documentation media.

**Note:**

Your system must have Adobe® Reader® and a web browser installed to access the documentation.

If you need to remove any previous instances of Adobe Reader before installing the current version of the application, then perform *Uninstalling Adobe Reader on page 109*.

- 9 Install MOTOPATCH. See *Installing Patches from the MOTOPATCH for Windows OS CD on page 109*.

**Note:**

This requirement does not apply to K-core systems.

Make sure all MOTOPATCH CDs are included, for:

- Operating system software

- SP1 upgrade CD for Windows 7
- Third-party applications

OS patching must be performed after patching third-party applications.

10 Install MOTODST locally. See *Installing MOTODST Locally on page 111*.

11 Install the Windows operating system configuration. Refer to “Applying Device-Specific Settings Using the Windows Supplemental CD” section in the *Windows Supplemental Configuration* manual.



Note: The procedure is obligatory for K-core systems.

For all other systems, you may decide not to perform this procedure, to avoid the lengthy reboot time. However, it must be acceptable within your organization's policy to rely on the configuration being provided by Group Policy Objects on the domain controllers.

12 Change the default Windows logon banner locally to customize it for your organization. Refer to “Changing Logon Banners Locally” in the *Windows Supplemental Configuration* manual.

13 Configure the FSA4000 Alerting Center Computers. See *Configuring the FSA4000 Alerting Center Computers on page 118*.

14 Configure the local hosts file. See *Configuring the Local Hosts File on page 124*.

15 Configure Network Time Protocol (NTP). See *Configuring Network Time Protocol (NTP) on page 125*.

16 Load the FSA4000 InTouch database. See *Loading the FSA4000 InTouch Database on page 121*.

17 Start FSA4000 Dispatch Software. See *Starting the FSA4000 Dispatch Software on page 126*.

Testing the ACT Module

When and where to use:

Follow the procedure below to test the ACT Module.

Procedure:

1 To test the ACT Module’s printing capabilities, ensure that a serial dot matrix printer is attached to the COM OUT RS-232 connector on the front panel of the ACT Module. Click **Printer Test** in the **Test Box** area of the screen.



Note: The ACT module cannot receive alerts from RTU during the testing phase.

Step result: If the print capabilities are operating properly, the test messages appear in the **ACT Communication Log**. The **Sending Data to ComOut** message appears in the **Current Output** box.

2 To test the Public Address (PA) system, click **Enable PA** in the **Test Box** area of the screen.



Note:

Enabling the PA system automatically stops the tone playback.

To disable the PA, click **Disable PA**.

Step result: The **Enable PA** button turns into **Disable PA**. The **PA Enabled** message appears in the **Current Output** box.

3 To test the stored .wav files, select the Tone(s) that you want to play from the **Select Tone to Play** pull down menu in the **Test Box** area of the screen. Click **Play Tone**. To stop the playback, click the **Stop Tone** or **Enable PA** buttons.

Step result: The **Play Tone** button turns into **Stop Tone**. The selected tone is played by the module. The **Playing Tone** message appears in the **Current Output** box.

Installing and Configuring FSA4000 Aux I/O

When and where to use:

Follow the process below to install and configure the FSA4000 Auxiliary Input and Output (Aux I/O) software.

Process:

- 1 Install the FSA4000 Configuration Tool. See [Installing the FSA4000 Configuration Tool on page 98](#).
- 2 For CAD interface organizations, install the FSA4000 Configuration Tool CAD Interface License. See [Installing the FSA4000 Configuration Tool CAD Interface License on page 100](#).
- 3 For FSA4000 systems with apparatuses, install the FSA4000 Configuration Tool Apparatus License. See [Installing the FSA4000 Configuration Tool Apparatus License on page 102](#).
- 4 Install the FSA4000 Configuration Tool Aux I/O License. See [Installing the FSA4000 Configuration Tool Aux I/O License on page 131](#).
- 5 Install the ACE3600 System Tools Suite (STS). See [Installing the ACE3600 System Tools Suite \(STS\) on page 105](#).
- 6 Install the ACE3600 System Tools Suite Service Pack. See [Installing the ACE3600 System Tools Suite Service Pack on page 105](#).
- 7 Install the FSA4000 Core Applications. See [Installing FSA4000 Core Applications on page 108](#).
- 8 Configure the FSA4000 Aux I/O. See [Configuring the FSA4000 Aux I/O on page 132](#).
- 9 For FSA4000 systems with apparatuses, configure the FSA4000 Apparatuses. See [Configuring the FSA4000 Apparatuses on page 118](#).
- 10 Connect the FSA4000 Front End Processor (FEP) to a serial printer. See [Connecting the FSA4000 FEP to a Serial Printer on page 133](#).
- 11 Connect the FSA4000 FEP to a Hyper Terminal. See [Connecting the FSA4000 FEP to a Hyper Terminal on page 135](#).
- 12 Connect the FSA4000 FEP to the Console Aux I/O Server. See [Connecting the FSA4000 FEP to the Console Aux I/O Server on page 137](#).

Installing the FSA4000 Configuration Tool Aux I/O License

When and where to use: Follow the procedure below to install the FSA4000 Configuration Tool Aux I/O license.



Note:

This procedure is optional and must be performed only when the Aux I/O option is used on the system.

The User Account Control dialog box may appear. If required, type the administrator user name and password. Click **Continue**, or **Allow**, or **OK**, or **Yes** to continue. Use the username you logged on with as the administrator user name.

Procedure:

- 1 Insert the **FSA4000 Aux I/O License** media into the optical drive.



Note: If the media does not open automatically, you can navigate to the root directory of the optical drive and double-click **AutoStart.exe**. If one or more security dialog boxes appear, for each dialog box click **Yes**, or **Run**, or **OK**.

- 2 In the installation home page, click the **FSA4000 Aux I/O License** link, and then click the disc icon next to the **FSA4000 Aux I/O License** entry.



Note: If the Active Content Warning dialog box appears, click **Yes**. If the Security Warning dialog box appears, click **Run**.

Step result: The **Welcome to the InstallShield Wizard for FSA4000 Aux I/O License** dialog box appears.

- 3 Install the license, following the instructions on the screen.
- 4 After the installation is completed, click **Finish**.

Configuring the FSA4000 Aux I/O

When and where to use:

Follow the procedure below to configure the FSA4000 Aux I/O.



Note: Before performing this procedure, make sure that the FSA4000 Configuration Tool project has already been created.

Procedure:

- 1 To start the FSA4000 Configuration Tool, from the **Start** menu, select **Programs/All Programs → FSA4000 Configuration Tool X.YY → Motorola → FSA4000 Configuration Tool**.
- 2 To open an existing project, perform the following actions:

If...	Then...
If the preferred project appears in the Recent projects pane,	click the link with the project name in the Recent projects pane.
If the preferred project does not appear in the Recent projects pane,	<p>perform the following actions:</p> <ol style="list-style-type: none"> 1 Select File → Open 2 In the Open FSA4000 Configuration Project dialog box, browse to the preferred project directory. 3 Select the preferred project name (.sap file). 4 Click Open.

Step result: The selected project appears on the screen.

- 3 To enable FSA4000 Aux I/O Alerting Interface, follow these steps:
 - a) Click the **Define Control Centers** link in the **Project** pane.
 - b) Make sure that the **AUXIO** Alerting Interface is selected.



Note: If the FEP printing logs capability is not required, unselect the **Use Printer** checkbox.

Step result: The Aux I/O Alerting Interface is enabled.

- 4 To define the FEP I/O Modules, perform the following actions:
 - a) Click the **Define I/O Modules** link in the **Project** pane.
 - b) Define **FEP I/O Modules**, according to the *FSA4000 Configuration Tool User Guide*.



Note: To open the *FSA4000 Configuration Tool User Guide*, from the **Start** menu, select **All Programs → Motorola → FSA4000 Configuration Tool X.YY → FSA4000 Configuration Tool User Guide**.

For information on defining Aux I/O, see the “Configuring the FSA4000 Aux I/O” section.

Step result: The FEP I/O Modules are defined.

- 5 To configure the FEP I/O functionality, perform the following actions:
 - a) Click the **Define FEP I/Os** link in the **Project** pane.
 - b) Define **FEP DIs** and **FEP DOs**, according to the “Defining FEP I/Os” section of the *FSA4000 Configuration Tool User Guide*.

Step result: The FEP I/Os are defined.

- 6 Select **File → Save**.
- 7 Select **File → Exit**.

Connecting the FSA4000 FEP to a Serial Printer

When and where to use:

Follow the procedure below to connect the FSA4000 FEP to a serial printer.



Note:

A printer with an RS-232 serial interface is required.

Only one printer interface is allowed. If there is already a hyper terminal configured as a serial printer, this procedure cannot be performed.

Create an FSA4000 Configuration Tool project before performing this procedure.

Procedure:

- 1 To start the FSA4000 Configuration Tool, from the **Start** menu, select **Programs/All Programs → Motorola → FSA4000 Configuration Tool X.YY → FSA4000 Configuration Tool**.

Step result: The FSA4000 Configuration application opens on the screen.

- 2 To open an existing project, perform the following actions:

If...	Then...
If the preferred project appears in the Recent projects pane,	click the link with the project name in the Recent projects pane.
If the preferred project does not appear in the Recent projects pane,	<p>perform the following actions:</p> <ol style="list-style-type: none"> 1 Select File → Open. 2 In the Open FSA4000 Configuration Project dialog box, browse to the preferred project directory. 3 Select the preferred project name (.sap file). 4 Click Open.

Step result: The selected project appears on the screen.

- 3 To check whether the FEP RS-232 port is configured for printer connection, perform the following actions:
 - a) Click the **Customize** link in the **Project** pane.
 - b) Click the **Ports** tab.
 - c) In the **Ports layout**, in the **FEP** tree panel, search for the port whose Connection Type is User Port (ladder controlled).
 - d) Remember the port number.
 - e) Select **File → Exit**.
- 4 Connect the serial printer to the FEP's remembered User port.
- 5 If you use a serial printer other than Okidata Microline 320, perform configuration according to the printer user manual. Further instructions apply only to the Okidata Microline 320 serial printer which is recommended.
- 6 Make sure that following communication parameters are as follows:
 - Bits per Second: 9600
 - Data bits: 8
 - Parity: None
 - Stop bits: 1
 - Flow control: None



Note: Before configuring the Okidata printer, make sure that paper is inside. The Okidata printer is configured by making changes to the menu option cursor point, and the options change on printouts.

- 7 To back up the Okidata printer's current Menu Settings, perform the following actions:
 - a) Make sure that paper is loaded in the printer.
 - b) Enter the Menu Mode (**Shift + SEL**).
 - c) Press **PRINT (PARK key)**.

Step result: Current settings are printed out.

- 8 To reset the menu to the standard settings (Factory Default), perform the following actions:
 - a) Turn off the printer.
 - b) Press **SEL + LF** while turning the printer on.
- 9 To configure the printer, perform the following actions:
 - a) Press **Shift + SEL** to enter the Menu Mode.
 - b) Press **GROUP** until the Group you wish to change appears in the first column.
 - c) Press **ITEM** until the item you wish to change appears in the second column.
 - d) Press **SET** until the setting you are looking for appears in the third column.
 - e) Press **Shift + SEL** to exit the Menu Mode and save your settings.

- 10 Configure the printer, according to the parameters in [FSA4000 Serial Printer Parameters on page 134](#) (parameters in **bold** are especially important):

Step result: The printer is configured.

FSA4000 Serial Printer Parameters

When connecting the FSA4000 FEP to a serial printer, configure the Okidata Microline 320 serial printer, according to the following parameters (parameters in **bold** are especially important):

GROUP	ITEM	SETTINGS
Printer Control	Emulation Mode	IBM PPR
Font	Print Mode	Utility
	Draft Mode	HSD
	Pitch	12CPI
	Proportional Spacing	No
	Style	Normal
	Size	Single
Symbol Sets	Character Set	Set 1
	Language Set	American
	Zero Character	Slashed
	Code Page	USA
Rear Feed	Line Spacing	6 LPI
	Form Tear-Off	Off
	Skip Over Perforation	No
	Page Length	11"

Table continued...

Top Feed	Line Spacing	6 LPI
	Bottom Margin	Valid
	Page Length	11"
	Wait Time	1 sec
	Page Length Control	By MENU Setting
Set-Up	Graphics	Bi-directional
	Receive Buffer Size	64K
	Paper Out Override	No
	Print Registration	0
	Operator Panel Function	Full Operation
	Reset Inhibit	No
	Print Suppress Effective	Yes
	Auto LF	No
	Auto CR	No
	SI Select Pitch (10 CPI)	17.1 CPI
	SI Select Pitch (12 CPI)	12 CPI
	Time Out Print	Valid
	Auto Select	No
	Centering Position	Default
	ESC SI Pitch	17.1 CPI
Parallel I/F	1-Prime	Buffer Print
	Pin 18	+5V
	Bi-directional	Enable
Serial I/F	Parity	None
	Serial Data 7/8 bits	8 bits
	Protocol	Ready/Busy
	Diagnostic Text	No
	Busy Line	DTR
	Baud Rate	9600 bps
	DSR Signal	Invalid
	DTR Signal	Ready on Sel
	Busy Time	200 ms

Connecting the FSA4000 FEP to a Hyper Terminal

When and where to use:

Follow the procedure below to connect the FSA4000 FEP to a hyper terminal.

**Important:**

In order for the ACE3600 CPU to print messages, the user must have Hyper Terminal installed.

Only one printer interface is allowed. If there is already serial printer connected to FSA4000 FEP, this procedure cannot be performed.

Before performing this procedure, make sure that the FSA4000 Configuration Tool project has been created.

Procedure:

- 1 To start the FSA4000 Configuration Tool, from the **Start** menu, select **Programs/All Programs → Motorola → FSA4000 Configuration Tool X.YY → FSA4000 Configuration Tool**.
- 2 To open an existing project, perform the following actions:

If...	Then...
If the preferred project appears in the Recent projects pane,	click the link with the project name in the Recent projects pane.
If the preferred project does not appear in the Recent projects pane,	<p>perform the following actions:</p> <ol style="list-style-type: none"> 1 Select File → Open. 2 In the Open FSA4000 Configuration Project dialog box, browse to the preferred project directory. 3 Select the preferred project name (.sap file) and click Open.

Step result: The selected project appears on the screen.

- 3 To check the FEP RS-232 port configured for printer connection, perform the following actions:
 - a) Click the **Customize** link in the **Project** pane.
 - b) Click the **Ports** tab.
 - c) In the **Ports layout**, in the FEP tree panel, search for the port whose Connection Type is User Port (ladder controlled).
 - d) Remember the port number.
 - e) Select **File → Save**.

Step result: The FEP serial printer port is recognized.

- 4 Connect the computer with Hyper Terminal to the FEP's remembered serial User port.
- 5 To start the Hyper Terminal, from the **Start** menu, select **Programs/All Programs → Accessories → Communications → Hyper Terminal**.



Note: If the **Default Telnet Program** question dialog box appears, select **Don't ask me this question again** and press **No**.

Step result: The Hyper Terminal starts.

- 6 To create a new connection, perform the following actions:
 - a) Enter a name for the new connection.
 - b) Select an icon for the new connection. Click **OK**.
- 7 In the **Connect To** dialog box, select the connection mode, perform the following actions:
 - a) Change the **Connect using** entry to **COMX**, where X is the computer serial port number connected to the FEP serial printer port.
 - b) Click **Configure**.
- 8 In the **COMX Properties** dialog box, make sure that the following communication parameters are set:

- Bits per Second: 9600
- Data bits: 8
- Parity: None
- Stop bits: 1
- Flow control: None

9 Click **OK**.

Step result: The COMX Properties dialog closes.

10 Click **OK**.

Step result: The Connect To dialog box closes.

11 Save the connection:

- a) Select **File** → **Save As**.
- b) Browse to the directory where you want to store the connection link.
- c) Type the link name in the **File name** field.
- d) Click **Save**.

Step result: The HyperTerminal link is saved and can be used later to open a connection with the FEP.

12 Select **File** → **Exit**.

Connecting the FSA4000 FEP to the Console Aux I/O Server

When and where to use:

Follow the procedure below to connect an FSA4000 FEP to a console Aux I/O Server.

Procedure:

- 1 Connect the console Aux I/O Server's relay output to the FEP digital input. For information about console installation and configuration:
 - If this is an MCC7500 console, see the *MCC 7500 Dispatch Console with GPIOM* or the *MCC 7500 Dispatch Console with VPM* manual (depending on your system configuration).
 - If this is a CENTRACOM Gold Elite console, see the *CENTRACOM Gold Series Installation Manual* (68P81097E45) available with Gold Elite consoles or on Motorola On Line (MOL).
- 2 Connect the console Aux I/O Server's relay input to the FEP digital output.



Note: This connection is optional.

Chapter

4

FSA4000 Configuration

This chapter details configuration procedures relating to Fire Station Alerting (FSA).

FSA4000 Configuration Tool Functions

The FSA4000 Configuration Tool is installed and run on the Alerting Master Computer (AMC) platform. More than one version of the FSA4000 Configuration Tool can be colocated on the configuration PC.

The FSA4000 Configuration Tool is used to create and deploy FSA4000 applications. The tool is used to define and configure all elements of an FSA4000 system. The properties of each element are configured to suit system requirements.

The FSA4000 Configuration Tool is used to perform the following functions:

- Define the network layout, with all network components (e.g., FEPs, RTUs, and communication links).
- Define the I/O Modules attached to the RTU and to the FEP.
- Define the fire station layout which applies to all stations in the system (zones, status, utilities, and Digital Inputs).
- Define the alert sequences (including audio tones sent to the stations).
- Customize the system parameters.

Once the project has been downloaded to the Alerting Center and remote station CPUs, the operator can begin to monitor and alert remote fire stations, using the FSA4000 Dispatch Software.



Note: For more information on the dispatcher operations, see the *FSA4000 Dispatch Software User Guide*.

For information on operating the FSA4000 Configuration Tool, see the *FSA4000 Configuration Tool User Guide*.

FSA4000 Dispatch Software Configuration on the AMC

For information on installing and configuring the FSA4000 Dispatch Software application, see the *FSA4000 Dispatch Software User Guide*.

RTU Configuration

For complete RTU configuration instructions, see the *FSA4000 Configuration Tool User Guide*.

RTU configuration involves first configuring FSA4000 FEP software on the RTUs and FEPs, and then installing the new firmware version on the ACE3600 units. For details, see *Configuring the FSA4000 FEP Software for RTU Configuration on page 140* and *Installing a New Firmware Version on ACE3600 Units for RTU Configuration on page 142*.

Configuring the FSA4000 FEP Software for RTU Configuration

When and where to use:

Follow the procedure below to configure ACE3600 RTUs with FSA4000 FEP software. For complete RTU configuration instructions, see the *FSA4000 Configuration Tool User Guide*.



Note:

For locally performed installations, make sure first to install all RTUs and then all FEPs in the system.

Procedure:

- 1 If the ACE3600 System Tools Suite (STS) MDLC communication driver is running, from the **Start** menu, select **Programs/All Programs → Motorola ACE3600 System Tools Suite XX.YY → Stop MDLC Communication Driver**. Click **OK**.

Step result: The MDLC Communication Driver is stopped.

- 2 To open the FSA4000 Configuration Tool, from the **Start** menu, select **Programs/All Programs → Motorola → FSA4000 Configuration Tool X.YY → FSA4000 Configuration Tool**.

Step result: The FSA4000 Configuration application opens on the screen.

- 3 To open an existing project, perform the following actions:

- a) Select **File → Open**.
- b) In the **Open FSA4000 Configuration Project** dialog box, browse to the preferred project directory.
- c) Select the preferred project name (.sap file).
- d) Click **Open**.

Step result: The selected project appears on the screen.

- 4 Click **Download File** in the panel bar on the left side of the window.

Step result: The **Download File** window appears on the right.

- 5 Click the **Core Version** box. Select the latest version of software.

Step result: The latest version of software is selected for download.

- 6 Click the **Erase type** combo box. Select **Erase flash and preserve siteConf**.

Step result: The project is configured to erase device flash and leave site configuration unchanged.

- 7 Click **Rebuild All** in the **Activities** section on the panel bar, on the left side of the window.



Important: This step must be performed even if project configuration has not changed.

Step result: The window with the build process progress bar appears, and the build process starts.

- 8 Select **Full** as the download method.

Step result: The full installation of software is selected for download.

- 9 Depending on the type of configuration being performed, perform the following actions:

If...	Then...
If this is FEP configuration or this is configuration of a new device (FEP or RTU),	<p>perform the following actions:</p> <ol style="list-style-type: none"> 1 Select the Local option to configure the devices using a direct connection. 2 Expand FEPs and RTUs in the Sites tree view. 3 Select the preferred device to download from the Sites tree view.
If this is a configuration of a previously configured and deployed RTU (for expansion),	<p>perform the following actions:</p> <ol style="list-style-type: none"> 1 Select Remote.

If...	Then...
	<p>2 Select the communication link.</p>  <p>Note: If the Wired IP communication link is available, select the Wired IP communication link.</p> <p>3 To select all the RTUs, check the RTUs checkbox on the Sites tree view.</p>



Important: You must install the RTUs before installing the FEPs.

10 Click **COM Setup**.

11 In the **Communication Setup** dialog box, configure communication:

If...	Then...
If this is a new device, or communication using the IP address is impossible,	<p>do the following:</p> <p>1 Select the Serial Port option.</p> <p>2 Connect the device to the COM port of the computer, using the Serial 2 port.</p> <p>3 In the Communication Port field, select the COM port to which the device is connected.</p> <p>4 In the Data Speed field, select 115200 for a device that is configured for the first time, or 9600 for a device that was already configured. Click OK.</p>
If the device was previously configured and has an assigned IP address,	<p>do the following:</p> <p>1 Select the Ethernet Port option.</p> <p>2 Type the IP address of the device in the Local Site IP Address field.</p> <p>3 Make sure that the IP Port Number value is set to 2002. Click OK.</p>

12 If the Apparatus license is installed and you know the selected RTU's or FEP's packet size, configure the MDLC Packet size:

- a) Click **COM Setup**.
- b) Click **More**.
- c) Change the Formatted buffer size (bytes) to proper Packet size value.



Note: Only **160** and **500** are allowed as values.

- d) Click **OK** if changes were made or **Cancel** if no changes were made.

13 Click **Download**.



Note: If the Communication driver password dialog box appears, type the communication password in the **Enter password** field. Click **OK**.

Step result: The download begins.

14 If text appears in the **Deploy application** panel that the download failed with error code: 80650002, repeat *step 9* through *step 13* and change the MDLC packet size in *step 12* to the other value (**160** or **500** respectively).

15 Repeat *step 9* through *step 13* for every RTU, and then for every FEP.



Note: It is recommended to first configure all devices which were previously configured, and then configure the new ones.

Installing a New Firmware Version on ACE3600 Units for RTU Configuration

When and where to use: Follow the procedure below to install a new firmware version on ACE3600 units.



Note: This procedure should be performed after the ACE3600 units have been configured. For locally performed installations, make sure to install all ACE3600 RTUs first and then all FEPs in the system.

Procedure:

1 If the ACE3600 System Tools Suite (STS) MDLC communication driver is running, from the **Start** menu, select **Programs/All Programs → Motorola ACE3600 System Tools Suite XX.YY → Stop MDLC Communication Driver**. Click **OK**.

2 To start the STS application, from the **Start** menu, select **Programs/All Programs → Motorola ACE3600 System Tools Suite XX.YY → STS**.

Step result: The **System Designer** window and the **Open Project** dialog box appear.

3 Click **New Project** in the **Open Project** window.

4 In the **Create New Project** dialog box, type the project name and description. Click **OK**.

Step result: The new project appears in the **System Designer** window.

5 To add a new local site, perform the following actions:

- a) In the **Inventory** tab, expand **RTU** on the **Elements** pane.
- b) Expand **ACE 3600**.
- c) Expand **CPU 3640**.
- d) Drag the **13.00** entry onto the **SystemRoot>** pane.

Step result: The **Add RTU** dialog box appears.

6 Type a site ID in the **Site ID** text field and click **Add**.

Step result: The new site appears on the **SystemRoot>** pane.

7 Select **Setup → Comm. Setup**.

Step result: The **Communication Setup** dialog box appears.

8 To configure communication, perform the following actions:

- a) Select the **Ethernet Port** option.
- b) In the **Local Site IP Address** field, type the IP address of the FEP or the RTU to be upgraded.



Important: Upgrade the RTUs before upgrading the FEPs.

c) Make sure that **IP Port Number** field is set to **2002**. Click **OK**.

9 To check current installed firmware on the RTU, select **System → Upload New Site**. Click **OK**.

10 In the RTU or FEP information dialog box, check the value under **Firmware Version** property.

- If the value in the Firmware Version property is equal to 13.00-X-YYY, click **Close** and proceed to [step 17](#).
- If the value in the Firmware Version property is not equal to 13.00-x-YYY, click **Close**.

11 Right-click on the site, and select **Download**.

12 When a message appears that the project needs to be saved before downloading, click **Yes**.

13 Select the **Local** check box in the **Connection** section.

14 Select the **Remote System File** in the **Files** list of each site to be installed and click **Download**.

**Important:**

ACE3600 firmware is downloaded from the STS to the FEP/RTU. Configuration and other FEP/RTU files are downloaded through the FSA4000 Configuration Tool.

However, in certain cases there may be a need to change the configuration, using the STS. Once this has been done, always download the configuration from the STS and not from the FSA4000 Configuration Tool. Before using the STS to change these parameters, go to the FSA4000 Configuration Tool, choose **Customize**, and check the **Communication** screen to see if the specific parameters can be changed.



Note: If a Communication driver password dialog box appears, type the communication password in the **Enter password** field.

15 When the **Download finished successfully** dialog box appears, click **OK**.

16 Click **Close**.

17 Repeat *step 5* through *step 16* for every RTU and FEP in the system.

18 Select **File → Exit**.

FEP Configuration

For complete FEP configuration instructions, see the *FSA4000 Configuration Tool User Guide*.

See *RTU Configuration on page 139* for a description of the FSA4000 FEP software configuration and new firmware version installation on RTUs and FEPs.

Configuring the ACT

When and where to use:

Installation, configuration, and operation information for the ACT module can be found in the *FSA4000 Audio Control Tone (ACT) Module Owners Manual*.

Follow the procedure below to load tones to the ACT module.



Note: Configuration should be performed locally, in the fire station where the equipment is located.

Procedure:

1 To start the FSA4000 ACT Loader, from the **Start** menu, select **Programs/All Programs → Motorola → FSA4000 ACT Loader X.YY → FSA4000 ACT Loader**.

Step result: The ACT Module Tester application opens on the screen.

2 Configure the ACT module according to the *FSA4000 ACT Module Owner's Manual*.

- When the apparatus feature is enabled, configure 30 tones.
- When the apparatus feature is not enabled, configure eight tones.

Note: To open the *FSA4000 ACT Module Owner's Manual* from the **Start** menu, select **Programs/All Programs** and then select **Motorola → FSA4000 Configuration Tool → FSA4000 ACT Loader → FSA4000 ACT Module Owner's Manual**.

**Important:**

For information on configuring the number of tones, see the “Selecting Tones” section of the *FSA4000 ACT Module Owner's Manual*.

Step result: The ACT module is configured.

- 3 Close the FSA4000 ACT Loader application.

FSA4000 Dispatch Software Application Configuration

The following sections give basic information on how to configure the Wonderware InTouch application software on your FSA4000 system. For more detailed information, see the *FSA4000 Dispatch Software User Guide*.

Testing Operation of an FSA4000 System

When and where to use:

Follow the procedure below to test the operation of the FSA4000 system.

Process:

- 1 Confirm that the serial port expansion is connected to the correct FEP, based on the system planner and design documents that came with your system.
- 2 Confirm that the Modbus DAServer is running on the AMC.
- 3 Confirm that the Wonderware Management console is running on the AMC.
- 4 Confirm that Modbus is polling data from the FEPs. This can be verified by viewing the Modbus program window. There should be data appearing in this window, in black text.



Note: If the text is red, check the Modbus connection between the server and the FEP.

- 5 Confirm that there is a valid network connection between the AMC and all ALCs connected to it.
- 6 Confirm that the FSA4000 Dispatch Software is running on each ALC.
- 7 Confirm that each ALC is configured to connect to the server. If the client is not connecting to the server, wait for a NETDDE connecting failure box to appear on the client, and press **Restart**.



Note: It may take up to 2 minutes for the connection to be established.

Adding a New FSA4000 Station

When and where to use: Follow the process below to add a new station to an existing FSA4000 system.

Process:

- 1 Install the core hardware and applications in the new station in an existing FSA4000 system. See *Installing Core Hardware and Applications to New FSA4000 Stations on page 144*.
- 2 Configure and download information to the new station. See *Configuring and Downloading Information for New FSA4000 Stations on page 145*.
- 3 Load and configure the FSA4000 Dispatch Software application with the new station. See *Loading and Configuring the FSA4000 Dispatch Software Application with New Stations on page 145*.
- 4 Start and execute applications for the new station. See *Starting and Executing Applications for a New Station on page 145*.

Installing Core Hardware and Applications to New FSA4000 Stations

When and where to use:

Follow the process below to install core hardware and applications to a new station as part of the overall process adding new stations to an existing FSA4000 system.

Process:

- 1 Install the ACE3600 RTU hardware kit at the new station. See the *ACE3600 RTU Installation on page 68* section in this manual, for more details.
- 2 Install the ACE3600 firmware, using the ACE3600 STS application for the new station CPU. For more information, see the *ACE3600 System Tools Suite (STS) User Guide* manual.
- 3 Install the relevant tones in the ACT module, using the ACT loader. See the *FSA4000 Audio Control Tone (ACT) Module Owner's Manual* for more information.

Configuring and Downloading Information for New FSA4000 Stations

When and where to use:

Follow the process below to configure and download information for new stations as part of the overall process of adding new stations to an existing FSA4000 system.

Process:

- 1 Open an existing project in the FSA4000 Configuration Tool. For more information, see the *FSA4000 Configuration Tool User Guide*.
- 2 If this is a system with apparatuses, back up the FSA4000 apparatuses configuration in the FSA4000 Dispatch Software and restore the apparatuses configuration in the FSA4000 Configuration Tool. See *Backing Up the FSA4000 Dispatch Software Configuration on page 187* and *Restoring the FSA4000 Dispatch Software Run-time Configuration on page 194*.
- 3 Update the project to add the new station to the existing system.
- 4 Download all relevant configuration files and applications to the new CPU and FEP(s).

Loading and Configuring the FSA4000 Dispatch Software Application with New Stations

When and where to use:

Follow the process below to load and configure the FSA4000 Dispatch Software Application with new stations as part of the overall process to add new stations to an existing FSA4000 system.

Process:

- 1 Upload the updated TAG definition file (created in the FSA4000 Configuration Tool) to the chosen GUI template. For more information, see the *FSA4000 Dispatch Software User Guide*.
- 2 Install the loaded FSA4000 Dispatch Software on all relevant dispatch PC stations. See *Installing the FSA4000 Dispatch Software Application on page 93*.

Starting and Executing Applications for a New Station

When and where to use:

Use this process to start and execute applications on the new station as part of the overall process to add a new station to an existing FSA4000 system.

Process:

- 1 Execute the core software applications. This should happen automatically when the CPU is started up.
- 2 Start the FSA4000 Dispatch Software application at each dispatch position.

System Security

When the FSA4000 Dispatch Software and InTouch Configuration software are installed, a number of groups are created. Each login name has its own password, which is changed only by the System Administrator. For more information on system security, refer to the *FSA4000 Dispatch Software User Guide*.

Dynamic System Resilience Configuration

In order for FSA4000 to work with the Dynamic System Resilience (DSR) feature, an optional backup FEP is required. A maximum of six FSA4000 FEPs are supported per subsystem (either Single or Redundant). With this configuration, only three zones in a DSR configuration can be supported by a single FSA4000 subsystem.

The primary FEP is configured with the IP address of the radio in the GGSN located at the primary core. The backup FEP is provisioned with the IP address of the radio in the GGSN located in the backup core. Upon the detection of a DSR switchover from the primary data subsystem to the backup data subsystem, the FSA4000 administrator must switch from the primary FEP to the back-up FEP.

In addition to manually switching to the backup FSA4000 FEP, in the event of a primary FSA4000 FEP failure, the operator must switch to the PDG from the backup core. This can be performed manually from the Unified Event Manager (UEM).



Note: Conventional IV&D does not support DSR.

For a detailed description of the Dynamic System Resilience feature, see the *Dynamic System Resilience* manual.

Configuring DSR

When and where to use:

Follow the procedure below to configure Dynamic System Resilience (DSR).

Process:

- 1 If a project with redundant FEP option was not loaded to the FSA4000 Dispatch Software, perform the following procedures:
 - a) Close the FSA4000 Report Generator. See [Closing the FSA4000 Report Generator on page 147](#).
 - b) Close the FSA4000 Dispatch Software. See [Closing the FSA4000 Dispatch Software on page 147](#).
 - c) Back up the FSA4000 Dispatch Software configuration. See [Backing Up the FSA4000 Dispatch Software Configuration on page 187](#).
 - d) Back up the FSA4000 Dispatch Software run-time configuration. See [Restoring the FSA4000 Dispatch Software Run-time Configuration on page 194](#).
 - e) Uninstall the FSA4000 Dispatch Software from the AMC, ALCs, and the consoles. See [Uninstalling the FSA4000 Dispatch Software on page 148](#).
 - f) Install the FSA4000 Dispatch Software on the AMC, ALCs, and the consoles. See [Installing the FSA4000 Dispatch Software Application on page 93](#).
 - g) Restore the Dispatch Software run-time configuration. See [Restoring the FSA4000 Dispatch Software Run-time Configuration on page 194](#).
 - h) Install the FSA4000 Configuration Tool Redundant/Dual FEP option license on the AMC. See [Installing the FSA4000 Configuration Tool Redundant/Dual FEP Option License on page 101](#).
- 2 Configure the FSA4000 DSR data on the AMC. See [Configuring FSA4000 Dynamic System Resilience Data on page 148](#).
- 3 If a project with the redundant FEP option was not loaded to the FSA4000 Dispatch Software, perform the following procedures:

- a) Configure the FSA4000 Alerting Center computers. See *Configuring the FSA4000 Alerting Center Computers on page 118*.
- b) Install MOTOPATCH. See *Installing Patches from the MOTOPATCH for Windows OS CD on page 109*.



Note: This requirement does not apply to K-core systems.

- c) Install MOTODST locally. See *Installing MOTODST Locally on page 111*.
- d) Apply device-specific settings on the AMC, ALCs, and the consoles, using the information provided in “Applying Device-Specific Settings Using the Windows Supplemental CD” in the *Windows Supplemental Configuration* manual.



Note: This process is obligatory for K-core systems, and optional for other systems.

- e) Reboot the AMC, ALCs, and the consoles.
- f) Load the FSA4000 InTouch database on the AMC, ALCs, and the consoles. See *Loading the FSA4000 InTouch Database on page 121*.



Note: This process is optional.

- 4 Configure the DNS Suffix and DNS Server List. Refer to the “Configuring DNS Suffix and DNS Server Addresses List on Windows-Based Devices” section of the *Authentication Services* manual.
 - 5 Configure the Windows Event Logging Client. Refer to the “Configuring Windows Event Logging Clients” section of the *Centralized Event Logging* manual.
-
- Note:** This procedure is not applicable for K-core systems or FSA4000 client software cohabited on dispatch consoles.
- 6 Start the FSA4000 Dispatch Software on the AMC, ALCs, and the consoles. See *Starting the FSA4000 Dispatch Software on page 126*.

Closing the FSA4000 Report Generator

When and where to use:

Follow the procedure below to close the FSA4000 Report Generator on ALCs and consoles.



Important: The FSA4000 Report Generator must be stopped and closed on all ALCs, CENTRACOM Gold Elite Consoles, and MCC 7500 Consoles before the AMC is upgraded, and must not be restarted until it is upgraded following the AMC upgrade.

Procedure:

- 1 Select **File → Exit** in the FSA4000 Report Generator window.
- 2 When the exit confirmation dialog box appears, click **Yes**.
- 3 Repeat this procedure for every instance of the FSA4000 Report Generator.

Closing the FSA4000 Dispatch Software

When and where to use:

Follow the procedure below to close the FSA4000 Dispatch Software on ALCs and consoles.



Important: The FSA4000 Dispatch Software must be stopped and closed on all ALCs, CENTRACOM Gold Elite Consoles, and MCC 7500 Consoles before the AMC is upgraded, and must not be restarted until it is upgraded following the AMC upgrade.

Procedure:

- 1 Click **Log Out** in the FSA4000 Dispatch GUI window.

- 2 In the logout confirmation dialog box, click **Yes**.
- 3 In the **FSA4000 Dispatch GUI Login** window, press **Alt + F4**.

Uninstalling the FSA4000 Dispatch Software

When and where to use:

Follow the procedure below to uninstall the FSA4000 Dispatch Software.



Important: The FSA4000 Dispatch Software must be stopped and closed on the AMC, all ALCs, CENTRACOM Gold Elite Consoles, and MCC 7500 Consoles.



Note:

- While performing this procedure, you need to be logged on locally to the AMC as motosec, or logged on locally to the ALC and consoles as secmoto.
- The User Account Control dialog box may appear. If required, type the administrator user name and password. Click **Continue**, or **Allow**, or **OK**, or **Yes** to continue. Use the username you logged on with as the administrator user name.

Procedure:

- 1 If the FSA4000 Dispatch Software is running, press **Alt + F4** to stop it.
- 2 Open the list of programs:
 - If the operating system is Windows 2008 or Windows 7, from the **Start** menu, select **Control Panel**. Click **Programs**. Click **Programs and Features**. Click **Uninstall or Change a Program**. If the Control Panel is in classic view, click **Control Panel Home** first.
 - If the operating system is Windows 2003, select **Start → Settings**. Click **Control Panel**. Double-click **Add or Remove Programs**.
 - If the operating system is Windows Vista, from the **Start** menu, click **Control Panel**. Double-click **Programs and Features**.
- 3 In the **Add or Remove Programs/Programs and Features** window, select **FSA4000 Dispatch Software X.YY**, and click **Remove** or **Uninstall**.
- 4 In the **Uninstall confirmation** dialog box, click **Yes**.
- 5 After the FSA4000 Dispatch Software is uninstalled, close the **Add or Remove Programs/Programs and Features** window.

Configuring FSA4000 Dynamic System Resilience Data

When and where to use:

Follow the procedure below to configure the FSA4000 Dynamic System Resilience data.

Process:

- 1 Save the existing FSA4000 Configuration Tool project under a new name. See [Saving an Existing FSA4000 Configuration Tool Project Under a New Name on page 148](#).
- 2 If a project with the redundant FEP option was not loaded to the FSA4000 Dispatch Software, install a redundant FSA4000 FEP. See [Installing the Redundant FSA4000 FEP on page 149](#).
- 3 If a project with the redundant FEP option was not loaded to the FSA4000 Dispatch Software, configure the FSA4000 RTUs with redundant FEP configuration. See [Configuring FSA4000 RTUs with Redundant FEP Configuration on page 150](#).
- 4 Configure the redundant FEP to use the backup core IV&D data service. See [Configuring the Redundant FEP to Use the Backup Core IV and D Data Service on page 151](#).

Saving an Existing FSA4000 Configuration Tool Project Under a New Name

When and where to use:

Follow the procedure below to save the existing FSA4000 Configuration Tool project under a new name on the AMC.



Note:

This procedure is for DSR expansion paths.

The logon username used in the procedure is motosec.

Procedure:

- 1 Navigate to the folder which contains the FSA4000 Configuration Tool projects. The default location for the FSA4000 Configuration Tool projects is: C:\Program Files (x86)\Motorola\PublicSafety\Fire\FSA4000\FSA4000_XYY\Projects
where XYY depends on the FSA4000 Configuration Tool version.

Step result: A window containing FSA4000 Configuration Tool projects appears.

- 2 To make a copy of the project which was used before Dynamic System Resilience expansion, use the following steps:
 - a) Select the folder which contains the preferred project.
 - b) Press **Ctrl + C** to copy the folder.
 - c) Press **Ctrl + V** to paste the folder.

Step result: A new folder with the name: Copy of zzz (where zzz is the name of the old project) is created in the FSA4000 Configuration Tool projects folder.

- 3 To modify the name of the new created folder, use the following steps:
 - a) Select the Copy of zzz folder. Press **F2**.
 - b) Enter a new name for the Copy of zzz folder. Press **Enter**.

Step result: The folder is renamed.

- 4 To close the folder that contains FSA4000 Configuration Tool projects, click the **Close** button in the upper right-hand corner of the window.

Installing the Redundant FSA4000 FEP

When and where to use: Follow the procedure below to install a redundant FSA4000 FEP.



Note:

This procedure must be performed only when the Redundant FEP option was not previously installed on the system.

Perform this procedure on the AMC.

Procedure:

- 1 Double-click the **FSA4000 Configuration Tool X.YY** icon on the desktop.
- 2 Select **File → Open**.
- 3 In the **Open Configuration Project** dialog box, navigate to the newly created folder to be used for the Dynamic System Resilience expansion, and select the .sap file. Click **Open**.
- 4 Select the **FEP Redundancy** option.
- 5 Select **Define Network** from the **Project** pane.

Step result: The system network layout appears.

- 6 Select a preferred FEP from the FEPs panel.

Step result: The properties of the selected FEP are displayed on the Properties panel.

- 7 Expand the **Redundant IP Config** drop-down list, on the **Properties** pane.

- 8 In the **Digital Trunking (IVD)** section of the redundant **FEP IP Configuration** window, enter the **IP address**, **Default Router**, and **Subnet Mask**, according to the configuration plan.
Step result: The details for the Digital Trunking (IVD) link are set up.
- 9 In the **Wired IP** section on the Digital Trunking (IVD) link pop-up window, enter the **IP address**, **Default Router**, and **Subnet Mask**, according to the configuration plan.
Step result: The details for the Wired IP link are set up.
- 10 Hide the drop-down list.
Step result: The properties of the selected FEP appear.
- 11 Repeat *step 6* through *step 10* for all FEPs in the system.
- 12 Select **File → Save**.
- 13 Close the window.

Configuring FSA4000 RTUs with Redundant FEP Configuration

When and where to use:

Follow the procedure below to configure FSA4000 RTUs with redundant FEP configuration.



Note:

This procedure is for DSR expansion, when a project with the Redundant FEP option was not loaded to the FSA4000 Dispatch Software.

The procedure must be performed only when the Redundant FEP option was not previously installed on the system.

Perform this procedure on the AMC.

The logon username used in the procedure is motosec

Procedure:

- 1 Double-click the **FSA4000 Configuration Tool X.YY** icon on the desktop.
- 2 In the **Configuration Tool** window, click the project created for Dynamic System Resilience expansion from the list of projects in the **Recent projects** pane.
Step result: The FSA4000 Configuration Tool project opens.
- 3 From the **Project** pane, select **Download Files**.
Step result: The **Download** pane appears.
- 4 Click **Build** on the **Activities** pane.
Step result: The project is built.
- 5 In the **Download Method** pane, select **Smart**.
- 6 Select the preferred RTU on the **Sites** panel, and click **COM Setup**.
- 7 Configure the communication in the **Communication Setup** dialog box:

If...	Then...
If this is a new device without an IP address, or there is no communication with the device using its existing IP address,	<p>perform the following actions:</p> <ol style="list-style-type: none"> 1 Select the Serial Port option. 2 Connect the device using Serial port 2 to the COM port of the computer. 3 In the Data Speed field, select 115200 for a device that is configured for the first time, or 9600 for a device that was already configured. Click OK.

If...	Then...
If the device was previously configured and has an assigned IP address,	perform the following actions: 1 Select the Ethernet Port option. 2 Type the IP Address of the FEP (or the locally configured RTU) in the Local Site IP Address field. 3 Make sure the IP Port Number field is set to 2002 and then click OK .



Note: If there is no need to change any settings in the Communication Setup, the **OK** button is disabled. Click **Cancel** to close the window.

8 Click Download.



Note: If the Communication driver password dialog box appears, type the password in the **Password** field, and click **OK**.

Step result: The download begins. After the download finishes, a message that the download finished successfully appears in the **Deploy application** pane.

9 Repeat *step 6* through *step 8* for all the RTUs in the system.

10 Select **File → Exit**.

Configuring the Redundant FEP to Use the Backup Core IV and D Data Service

When and where to use:

Follow the procedure below to configure the redundant FEP to use the backup core IV&D data service.



Note:

This procedure is for DSR expansion paths.

Perform this procedure on the AMC.

The logon username used in the procedure is motosec.

Procedure:

1 Double-click the **FSA4000 Configuration Tool X.YY** icon on the desktop.

2 In the **Configuration Tool** window, click the project created for Dynamic System Resilience expansion from the list of projects in the **Recent projects** pane.

Step result: The FSA4000 Configuration Tool project opens.

3 When the project opens, click **Define Network** in the **Project** pane.

Step result: The system network layout appears.

4 Select the preferred RTU from the **RTUs** pane.

Step result: The properties of the selected RTU are displayed in the **Properties** pane.

5 Expand the **IP Configuration** drop-down list on the **Properties** pane.

Step result: The **Selected RTU IP Configuration** pop-up window appears.

6 In the **Digital Trunking (IVD)** section of the pop-up window, enter the **IP address**, **Default Router**, and **Subnet Mask**, according to the backup core IV&D IP addresses space.

Step result: The details for the Digital Trunking (IVD) link are set up.

7 Hide the drop-down list.

Step result: The properties of the selected RTU appear.

8 Repeat *step 4* through *step 7* for each RTU in the system.

9 Click **Download Files** in the **Project** pane.

Step result: The **Download** pane appears.

10 Click **Build** in the **Activities** pane.

Step result: The project is built.

11 In the **Download Type** pane, select **Local**.

12 In the **Download Method** pane, select **Smart**.

13 Perform the following actions:

a) Expand **FEPs** on the **Sites** tree view.

b) Select the redundant FEP for the preferred Main FEP on the **Sites** panel, and click **COM Setup**.

14 Configure the communication in the **Communication Setup** dialog box:

If...	Then...
If this is a new device without an IP address, or there is no communication with the device using its existing IP address,	perform the following actions: 1. Select the Serial Port option. 2. Connect the device using Serial port 2 to the COM port of the computer. 3. In the Communication Port field, select the COM port to which the device is connected. 4. In the Data Speed field, select 115200 for a device that is configured for the first time, or 9600 for a device that was already configured. Click OK .
If the device was previously configured and has an assigned IP address,	perform the following actions: 1. Select the Ethernet Port option. 2. Type the IP Address of the FEP (or the locally configured RTU) in the Local Site IP Address field. 3. Make sure the IP Port Number field is set to 2002 . Click OK .



Note: If there is no need to change any settings in the Communication Setup, the **OK** button is disabled. Click **Cancel** to close the window.

15 Click **Download**.



Note: If the Communication driver password dialog box appears, type the password in the **Password** field, and click **OK**.

Step result: The download begins. After the download finishes, a message that the download finished successfully appears in the **Deploy application** pane.

16 Repeat *step 13* through *step 15* for every Main FEP in the system.

17 Select **File → Exit**.

Chapter

5

FSA4000 Optimization

This chapter contains optimization procedures and recommended settings relating to FSA4000.

Optimizing FSA4000 Systems

There are several values that can be adjusted to improve performance and optimize an FSA4000 system. The default values should work for most systems. These values are located in the Customize section of the FSA4000 Configuration Tool. The online help includes a description of what each value means.

In an IV&D system, there can be large gaps between stations being alerted (non-sequential alerting) or some Last Command Failures. In such cases, the system may be getting messages too quickly. To fix the problem, decrease the number of simultaneously alerted stations and/or increase the amount of time between station alert transmissions. The number of simultaneously alerted stations can be adjusted for the IV&D system setup and usage. If the Last Command Failures are always the same site, the issue is most likely related to that site and not a system-wide parameter.

In a Broadcast style system (IP or non IV&D radio), the alert messages are sent out to all stations at once. If the system is experiencing failures, the number of alert messages can be increased. The normal value in a 4.1 Trunking system is 6. In an IP-based system, default usually works.

If remote site COS messages are being missed, the number of Change of State retries can be increased. If multiple stations are sending COS at or around the same time, increase this number to 8 or higher.

The FSA4000 system performs communication checks to all stations twice a day. In addition, it performs checks after each alert. These communication checks are set using the **Hour 1** and **Hour 2** parameters. Set these checks to a time with little other activity. Any station alerts delay the requests, but these checks utilize the communications system.

Chapter

6

FSA4000 Operation

This chapter details tasks to perform once the FSA4000 Dispatch Software is installed and operational on your system.

Getting Started with FSA4000

This section describes the initial steps to take when starting to work with FSA4000, and the basic elements of the FSA4000 Dispatch GUI.

Loading the Application

The FSA4000 Dispatch Software supports Microsoft Windows Server 2008 R2 Standard Edition (x64), Microsoft Windows Server 2003 Standard Edition R2 with SP2, and Microsoft Windows Vista™ Business edition (32-bit) with SP2. After the FSA4000 system is configured using the FSA4000 Configuration Tool, a database definition file is created on the AMC. The file has a .csv extension. To run the FSA4000 Dispatch Software, load this file into each ALC/AMC computer in the Alerting Center.

Once the database definition file is loaded into each ALC/AMC computer in the Alerting Center, the FSA4000 Dispatch GUI can be started on the ALC. Click the **FSA4000 Dispatch Software** icon on the desktop or select **Start → Programs → Wonderware → WindowViewer**.



Note: The User Account Control dialog box may appear. If required, type the administrator user name and password. Click **Continue**, or **Allow**, or **OK**, or **Yes** to continue. Use the username you logged on with as the administrator user name.

Logging On

When and where to use:

Contact the system administrator for user name, password, and computer name information, before logging on.

Press **About** to view the system version information.

To log on:

- 1 Press **User Name**. A virtual keyboard appears.
- 2 Use the virtual keyboard to enter the preferred user name. Click **OK**.
- 3 Click the **Password** field of the **Login** window, and enter the password, using a virtual keyboard.
- 4 Click the **Log on to** field of the **Login** window.
- 5 Enter the computer name, using the virtual keyboard, and choose **Send** (or choose **Cancel** to cancel the login).

Immediately after the successful logon, the screen changes to the **Main Alerting** screen.

System Menu Bar

The **System Menu** Bar is the main method used by an operator to navigate throughout the FSA4000 Dispatch Application. It appears on the top of the screen. The menu bar comprises:

- **Alerting:** Displays the **Main Alerting** screen. The **Main Alerting** screen displays each fire station in the system and its associated indications for availability, communication link status, and alarm status. All commands in the fire dispatch system are sent out from here.
- **Station Information:** Displays the **Station Information** screen. The **Station Information** screen displays all statuses/alarms that have occurred in the system. If there is at least one unacknowledged alarm in one of the stations in the system, the **Station Information** indication on the menu bar blinks. On a **Station Information** screen with more than 25 stations, the **Back/Next** button also flashes to indicate the page where the unacknowledged alarm may be found.
- **System Reports:** Displays the **System Reports** screen. The **System Reports** screen displays the Alarm Summary (a summary of all current alarms in the system, acknowledged and unacknowledged). All the events in the system (all the dispatch activity, alerts, interrogations, and so on) can be viewed by using the System History option. The System History displays details of all alarms and events since the system start-up.
- **Interrogate:** Displays the **Interrogate** screen. The names on the link buttons reflect the link type.
- **Manager:** Displays the **Manager** screen. A manager can define the following dispatcher options:
 - Enabling/Disabling dispatcher permissions
 - + Assignment of apparatuses
 - + Changing the default sequence configuration
 - + Changing the PA mode
 - Setting the PA mode for all clients (a client can later change it locally if it has the right permissions)
 - Setting the default sequence for all clients (a client can later change it locally if it has the right permissions)
-  **Note:** If you are logged on as a dispatcher, the **Customization** tab replaces the **Manager** tab. If you have the right permissions, selecting the **Customization** tab allows you to change the PA popup mode and default sequence locally.
- **Log Out:** Displays the **Logout** popup. This command allows the user to log out of the system.

Main Alerting Screen

The **Main Alerting** screen displays all the fire stations in the system and their associated indications for availability, communication link status, and alarm status. The **Main Alerting** screen is different for the Zone layout, Non-Zone layout, Non-Zone layout with Multi Zone GUI, and Zone/Non-Zone layout with Apparatuses.

Station and Command Selection

The Main Alerting Screen displays all the fire stations in the system, and their associated indications for availability, communication link status, and alarm status. The operator must select the stations to alert. The color of the station number indicates the status of each station. Stations may be enabled or disabled, available for any operator or already alerted by another operator. With the station zones alerting system, up to five zones are shown in each station, with disabled zones in gray. If the Apparatus feature is enabled, the various apparatuses (devices or personnel) are depicted in the stations. In this case, the layout can be configured for up to 8 or up to 15 apparatuses. In the Multi Group Alerting GUI, the operator can select a group of stations.

Click the preferred station/zone/apparatus to select it. The operator can also select all the fire stations/zones/apparatuses by clicking the **Select All** button. To deselect a selected station, click it again. To clear all selections, click the **Clear All** button. In the **Multi Group Alerting** GUI, use the **Select all in group** button to select a group of stations, and the **Clear all in group** button to deselect them.

Once the preferred group/stations/zones/apparatuses have been selected, the preferred alert sequence may be selected. Buttons which represent sequences are available. The text of those buttons is defined in the FSA4000 Configuration Tool (for example, ‘Alert’, or ‘WAKE UP’) during system setup. In Station (Non-Zone) layout systems, up to eight Dispatcher Alert sequences may be available. Press the preferred alert sequence button (toggle) from the bottom of the screen, to select.

In a zoned system, the operator can select the sequence for one of the five zones (for example, Truck, Medic, Engine, Pumper, etc.) Next, the operator can send the zone selection to the selected stations by pressing the **Start** button. The operator can also select the **Alert All** button to alert all five zones. All alerts are mutually exclusive, which means that only one alert is sent to a zone or a multitude of zones at a time. The application automatically deselects the old sequence, once a new one is selected.

In Zone layout systems, only one Dispatcher Alert sequence is defined. This sequence does not appear on a button and is the default (without being selected). An optional General Announcement sequence (if defined) may also be available. To select the General Announcement sequence, press the **General** button. (The General Announcement sequence is transmitted instead of the Dispatcher Alert sequence). If no General Announcement sequence is defined, no sequence buttons appear on the screen.

Alert Sequence

Table 13: Characteristics of alert sequences in both Zone layout and Non-Zone layout

Zone layout systems	Non-Zone layout systems
<ul style="list-style-type: none"> Only one Dispatcher Alert sequence is defined. This sequence does not appear on a button and is the default (without being selected). In systems with the AMC interface, the alerting sequence is pre-defined as the default sequence, and the user is not allowed to change it. In systems with interfaces other than AMC, an alerting sequence can be defined as the default sequence. The default sequence is highlighted automatically by the FSA4000 application when the dispatcher selects a station/zone/apparatus. The dispatcher can override this by selecting a different alerting sequence. 	<ul style="list-style-type: none"> Up to eight Dispatcher Alert sequences may be available. A sequence (only one) can be defined as the default sequence. This selection is optional, the user does not have to define the default sequence.



Note: Some alert sequences activate the voice channel (Public Address system) to provide more detailed incident-specific information. If the selected sequence activates the voice channel (PA), the PA time bar appears, showing that the voice channel is open. The number of seconds remaining appears next to the PA time bar. The time bar and number of seconds counts down the time that remain until the voice channel is closed.



Important: The PA time bar contains a stop indicator, enabling the dispatcher to stop the PA in all alerted RTUs. To stop the alert sequence for one or more fire stations in the system, select the preferred fire stations and click **Stop**. To stop the alert sequence for all selected fire stations in the system, click **All**, and then click **Stop**.

Main Alerting Screen Display Elements

The following table provides a description of each of the **Main Alerting** Screen display elements.

Table 14: Main Alerting Screen Display Elements Description

Element	Description
Station Names	Lists all the stations in the system. In the Multi Group Alerting GUI, all the stations are divided into 2-6 groups. A set of stations is selected and an alert sequence is sent to them. With the apparatus feature enabled, the stations are displayed with their apparatuses (up to 8 or up to 15) and a single station can be selected to change the status of its apparatuses.
Group Names	Shows all the groups in the system with their stations assigned. A whole group of stations can be selected with one click. This element is available only in Non-Zone layout without an apparatus.
	 Note: This element applies only to the Multi Group Alerting GUI.
Subgroup Names	In a 4 group system with subgroups in the Multi Group Alerting GUI, the subgroup names in each of the 4 groups.
Navigation Buttons	Enable the user to navigate to the preferred station with one click.
<Sequences>	Selects the predefined dispatcher alert sequence to be sent to the stations. In a Station (Non-Zone) layout, up to 8 sequences may be available. In a Zone Layout, only one sequence (General Announcement) may be available.
APB	When pressed, enables transmit of voice alert to an assigned talkgroup. When released, no voice is transmitted. If the FSA4000 Dispatch Software failed to communicate with the console application, the APB button is disabled and a lightning icon appears above the button.
	 Note: This element applies to the ARTA feature and APB transmit mode only.
TALKGROUP	The talkgroup assigned to the dispatcher for voice alerting during PA. Can be exclusively assigned to the dispatcher, or shared with other dispatchers. If the FSA4000 Dispatch Software failed to communicate with the console application when the FSA4000 system is configured for the general transmit mode, a crossed out lightning icon appears on the screen.
	 Note: This element applies to the ARTA feature only.
Back/Next	In a system where the number of stations requires more than one display page, click on the BACK/NEXT button in the bottom of the screen to scroll between pages.
Start	Starts sending the alert sequence to the selected stations.
Stop	Stops sending the alert sequence to the selected stations.
PA Time	The PA time bar shows that the voice channel is open. The number of seconds remaining are displayed next to the PA time bar.
	 Important: The PA can be stopped by pressing the stop PA indicator on the PA time bar.
	 Note: If the PA popup mode is enabled in the client, the FSA4000 Dispatch Software displays the talk bar at the top-most not focused pop-up window when the PA is activated, in addition to the embedded (normal) PA time bar. The PA can be stopped by pressing the stop PA indicator in the popup window.
Controls	Selects the special control sequence (if one is defined) to be sent to the stations.

Table continued...

Assignment	When pressed, opens the Apparatuses Assignment screen. The dispatcher can move apparatuses from one fire station to another station or to another zone, or change the indicator attached to an apparatus. This button only appears on the dispatcher's screen if assignment is enabled for dispatchers by the administrator. The button always appears on the administrator's screen.
Clear All	Clears all selected stations on the screen.
Select All	Selects all stations on the screen.
Group Clear All and Group Select All	Clears or selects all stations in a group.  Note: This element applies only to the Multi Group Alerting GUI.

Change Status Screen Display Elements



Important: To open the **Change Status** screen, click the station number in the **Main Alerting** screen. This screen displays the station with all of its zones (in zone layout, when the apparatus feature is disabled) or apparatuses (when the apparatus feature is enabled). Three toggle buttons below the name are used to change the zone/apparatus status: **In/Out**, **Out**, **Available**, and **OOS**. Click the preferred toggle button to change the status.

Table 15: Change Status Screen Display Elements Description

Element	Description
In/Out Toggle Button	If the current status is In Quarters , sets the status to Out of Quarters . If the current status is Out of Quarters or Out, Available , sets the status to In Quarters .
Out,Av Toggle Button	Sets the apparatus (in Apparatus Alerting) or zone (in Zone Alerting) status to Out, Available .
OOS Toggle Button	Sets the apparatus or zone status to Out of Service .
Cancel	Cancels all changes and closes the Change Status screen.
Accept	Accepts the apparatus or zone status changes and closes the Change Status screen.

Apparatuses Assignment Screen Display Elements

The **Apparatus Assignment** screen allows an operator to move apparatuses from one fire station to another station or another zone. It also allows modification of the indicator attached to an apparatus.

Table 16: Apparatuses Assignment Screen Display Elements Description

Element	Description
Select Station 01	Drop-down list used to select the source station.
Select Station 02	Drop-down list used to select the destination station.
Select	When pressed, the selected station(s) are displayed in the Station 01/02 layout.
Station 01 Layout	Changes the displayed layout to 3x3 or 4x4 apparatuses in a selected station.
Apparatus Type	The type of apparatus (for example, fire truck) as defined in the FSA4000 Configuration Tool.

Table continued...

Apparatus Name	The name of the apparatus (for example, Pump 05) as defined in the FSA4000 Configuration Tool.
Zones	In Zone layout, up to 5 zones that can be assigned to the apparatus. In Station (Non-Zone) layout, no zones are displayed.
DIs	When the DI indicator feature is enabled, up to 15 DIs can be attached to one apparatus.
Cancel	Cancels all changes and closes the Apparatuses Assignment screen.
Accept	Accepts the apparatus status changes and closes the Apparatuses Assignment screen.

Station Information Screen

The FSA4000 system includes a set of preconfigured alarms and statuses, for example, AC Power status, IP Module status, etc. This information enables the dispatcher to monitor the station and manage equipment faults. The **Station Information** screen displays all statuses and alarms that have occurred in the system.

Station Information Screen Display Elements

The following table provides a description of each of the display elements of the **Station Information** screen.

Table 17: Station Information Screen Display Elements Description

Element	Description
Menu Bar	Allows you to switch to other Dispatch or Manager screens and displays the current date and time of the PC.
ACKNOWLEDGE <Station Name>	The station number in the ACKNOWLEDGE row at the top of the screen is used to acknowledge all of the alarms in that station.
<Alarm Indicators>	The alarm indicators are shown for each relevant station in the system. An alarm which is flashing requires an acknowledgement.
<Status Indicators>	The status indicators are shown for each relevant station in the system.
Acknowledge All	Used to acknowledge all alarms in the system.
FEP Communications	Used to check the status of the connectivity (communication) between the AMC computer/station and the connected FEPs.
BACK/NEXT	It is possible to have so many stations that the view requires more than one display page. Click the BACK/NEXT button on the bottom of the screen to scroll between pages.
Group Name	Displays the name of the selected group. (Displayed in Multi Group Alerting GUI only.)
Acknowledge Group	Acknowledges all alarms in all stations that are assigned to a specific group. (Displayed in Multi Group Alerting GUI only.)
Select Group	Selects all stations that are assigned to a specific group. (Displayed in Multi Group Alerting GUI only.)

System Reports Screen

The following are the two options available on the **System Reports** Screen:

- **Alarm Summary:** Summary of all current alarms in the system, both acknowledged, and unacknowledged.
- **System History:** Details of all alarms and events since the system start-up.

Once an alarm has been acknowledged and it returns to normal, you no longer see the alarm on this screen. To acknowledge specific alarms, select the preferred station from the drop-down list. (The list includes the names of each station defined in the system, plus the ALL option). Then press the **Acknowledge Selected** icon. To acknowledge all alarms, press the **Acknowledge All** icon.

For specialized reports based on selected criteria, the FSA4000 includes an SQL-based Report Generator. The FSA4000 Report Generator generates reports based on the alarms and events logged in the FSA4000 system. To start up/activate the Report Generator, press the **FSA4000 Report Generator** icon on the bottom of the screen. The FSA4000 Report Generator application runs on the Dispatch AMC/ALC computer. Use the FSA4000 Report Generator to generate and print reports.

Interrogate Screen

The **Interrogate** screen shows each interrogated station and the status of each configured communication link in a single link or a dual link system. Press the **Interrogate** command in the menu bar to display the **Interrogate** screen. The names on the link buttons reflect the link type, as defined in the FSA4000 Configuration Tool.

In a single link system, press the link button of the preferred active station to interrogate that station. In a dual link system, two data channels are available to interrogate a station. Press one link out of the two to interrogate the preferred active station on that link. In order to interrogate all stations, press the **Interrogate All** button in the lower right corner of the screen. To stop interrogating selected stations, press the **Stop Interrogation** button on the bottom of the screen. In dual link systems, you can choose one out of two **Stop Interrogate** buttons (one per link).

In the Multi Group Alerting GUI, the stations are displayed per group (and in a 4-group configuration, they can be displayed by subgroups). The screen then includes a **Select group** button and navigation buttons to choose the appropriate group to be displayed. The Multi Group Alerting GUI is supported in single link and dual link systems.

Manager Screen

The **Manager** Screen is available to personnel with an administrator level login. This screen allows the administrator to perform the following administrative tasks:

- Station Enabling/Disabling
- Link Enabling/Disabling (in a Dual Link System Only)
- Zone Enabling/Disabling (in a Zone Layout System)
- Updating Date and Time
- Interrogate Hours
- FEP Communications

A manager can define the following dispatcher options:

- Enabling/Disabling or dispatcher permissions:
 - Assignment of apparatuses
 - Changing the default sequence configuration
 - Changing the PA mode
- Setting the PA mode for all clients (a client can later change it locally if it has the right permissions)
- Setting the default sequence for all clients (a client can later change it locally if it has the right permissions)

In the Multi Group Alerting GUI, the stations are displayed per group (and in a 4-group configuration, they can be displayed by subgroups). The screen then includes a Select group button and navigation buttons to choose the appropriate group to be displayed. The Multi Group Alerting GUI is supported in single link and dual link systems.



Note: For the Multi Group Alerting GUI, the Manager chooses the appropriate group with the **Select group** button.

Station Enabling/Disabling

The Alerting Center administrator (Dispatch manager) can disable and enable specific stations in the system. A disabled station is not functional and is grayed out in all screens in the application (for example, the **Alerting** screen). Enabling a station causes it to be operational again in the local Alerting Center.



Note: You can disable a station if at least one of the following conditions are met:

- A station becomes inactive, but no configuration changes have taken place.
- You are working on a system with Alerting Center redundancy.

Link Enabling/Disabling (in a Dual Link System Only)

The Alerting Center administrator (Dispatch manager) can enable/disable each link to each station, according to system needs. When a link is disabled, the FEP does not communicate with that station through the disabled link. Enabling a link signals the FEP to renew that communication link to that station.

Zone Enabling/Disabling (in a Zone Layout System)

The Alerting Center administrator (Dispatch manager) can disable specific zones in each configured station. Disabling a zone causes it to be non-functional and grayed out in the alerting screen. Enabling a zone makes the disabled zone operational again.

Updating Date and Time

The operator can modify the computer clock by pressing the **Sync Computer** button.

The manager can update the FEP time by pressing the **Update FEP** button. This button updates the FEP time to match the fire alerting server time. Once the FEP time is changed, the FEP synchronizes its time with all of the RTUs.

Interrogate Hours

Two interrogation hours are configured for the FEPs to interrogate all remote stations in the system. The operation is performed using the FSA4000 Configuration Tool (**Communication Parameters** window). When you press the **Interrogation Hours** button, a new window appears. This window allows the user to enter specific times of the day when the FEP performs the interrogations. The times can be turned on or off by clicking the toggle switch with the mouse or by using the touch screen. To set the times, move the mouse pointer over to an hour or a minute display, and then click the left mouse button. A numeric pad appears that allows the user to designate a time for the FEP to perform an interrogation on all the enabled stations.

FEP Communications

The FEP Communications option allows the Manager to monitor the communication with Primary and Backup FEPs. The FEP communication checks the communication between the server and the two FEPs. The FEP Communication window also displays which FEP is currently polled:

- **Switch FEPs:** This button enables the administrator to toggle between the primary and Backup FEP. Switching between the FEPs alternates between the primary and back-up FEPs, as to which FEP is polled.
- **ACK Alarms:** This button acknowledges communication failures that occur between the FEPs and the fire alerting server.

Special Control Screen

The **Special Control** screen displays each fire station in the system. It also displays every special control button for sending a predefined control sequence to selected stations.



Note: This screen does not support the Multi Group Alerting GUI – it is not divided into groups when the Multi Group feature is enabled.

Special Control Screen Display Elements

The following table provides a description for each of the display elements of the **Special Control** screen.

Table 18: Special Control Screen Display Elements Description

Element	Description
Station Names	Lists all the stations in the system.
<Special Control>	The <Special Control> button on each preferred station is selected and the predefined special control sequence is sent to them.
Activate	When pressed, activates the predefined special control sequence in all selected fire stations and, for example, opens doors.
Deactivate	When pressed, sends the special control deactivate sequence to all selected fire stations and, for example, closes doors.
GO TO Alerting	Returns the user to the Main Alerting screen.
BACK/NEXT	It is possible to have so many stations that the view requires more than one display page. Click the BACK/NEXT button on the bottom of the screen to scroll between pages.

Audio and Tone Routing at a Station

For detailed ACT module operation procedures, see the *FSA4000 Audio Control Tone (ACT) Module Owners manual*.

Operating the FSA4000 ACT Module

When and where to use: Follow the process below to operate the FSA4000 Audio Control & Tone (ACT) module. For more detailed information and procedures, see the *FSA4000 Audio Control Tone (ACT) Module Owner's Manual*.

Process:

- 1 Access the ACT Module Tone Loader. See [Accessing the ACT Module Tone Loader on page 164](#).
- 2 Test the ACT module. See [Testing the ACT Module on page 130](#).
- 3 Select tones from your PC to be stored in the ACT module. See [Selecting Tones on page 165](#).
- 4 Load and update new tones into the ACT Module. See [Loading and Updating Tones on page 165](#).
- 5 Save the ACT module tone loader configuration. See [Saving the Tone Loader Configuration on page 166](#).
- 6 Use the ACT Communication Log. See [Using the ACT Communication Log on page 166](#).
- 7 View the ACT Module Loader online help. See [Viewing the Online Help on page 166](#).
- 8 Exit the ACT Module Tester/Loader utility. See [Exiting the ACT Module Tester/Loader Utility on page 167](#).

Accessing the ACT Module Tone Loader

When and where to use:

Follow the procedure below to access the ACT Module Tone Loader.

Procedure:

- 1 Connect to the ACT Module. See "Connecting the ACT Module to the PC" in the *FSA4000 Audio Control & Tone (ACT) Module Owner's Manual*.
 - 2 To start the FSA4000 ACT Loader, from the **Start** menu, select **Programs/All Programs → Motorola → FSA4000 ACT Loader X.YY → FSA4000 ACT Loader**.
- Step result:** The ACT Module Tester application opens on the screen.
- 3 Access the ACT Module Tone Loader:
 - Click **Update Stored Tone Configuration** on the **ACT Module Tester** screen.
 - Select **File → Load Tone (Ctrl + L)** on the **ACT Module Tester** screen.
 - 4 In the **ACT Module Loader** screen, you can change the number of tones in the unit, select .wav files, and also update the tones in the module. See [Selecting Tones on page 165](#) and [Loading and Updating Tones on page 165](#).

ACT Module Loader - Description of Fields and Buttons

The ACT Module Loader contains a variety of fields and buttons.

Field/Button	Description
Record Tones	Records selected tones in the ACT Module.
Record All Selected Tones	Records all tones selected under Update Tones 1-10 in the ACT Module.
Update Number Of Tones	Updates the total number of tones in the ACT Module.
Update button	Updates the total number of tones in the ACT Module to the value selected in the Number of Tones field.
Number of Tones	The number of tones defined for the ACT Module are 1,2,4,8,15, or 30. The number of tones determines the permitted length of each tone.
Tone Length	The permitted length of each tone (in seconds).
Select Files	Select a directory (through file system navigation windows) containing the .wav files you would like to add to the stored tone banks of the ACT Module.
Set As Default Directory	Saves the selected directory as the default directory for the ACT Module Tone Loader.
View Help	Opens the ACT Module Tone Loader help file.
Add Selected	Adds the selected .wav files to the drop-down lists in the Update Tones 1-10 section.
Add Dir	Adds all the .wav files from the current selected directory to the drop-down lists in the Update Tones 1-10 section.
Update Tones 1-10	Assigns a new tone (.wav) to each of the available 10 Tone Numbers in the ACT Module.
Update Tone x To	When checked, enables the Select New Tone drop-down list for the given Tone number.

Table continued...

Select New Tone	Selects a tone (.wav) from the list of available tones to assign to the Tone number. The list is populated from the .wav files under Select Files. See Select Files above.
Save Setup As	Saves the list of selected tones in the .act file, for future use.
Load Saved Setup	Loads the saved .act file of tones.
Reset	Resets the Update <Tone x> To: fields to the default.

Selecting Tones

When and where to use:

Tones can be stored/updated in the ACT Module. Use this procedure to select tones to load into the ACT Module.

Procedure:

- 1 To set/update the total number of tones in the ACT Module, use the **Number of Tones** drop-down list to select the preferred number [1,2,4,8,15,30].
Step result: The corresponding permitted tone time length (in seconds) appears to the right.
- 2 Click **Update** to process the change.
- 3 Under **Select Files**, use the file system navigation drop-down list and window to select a directory containing the .wav files to be added to the stored tone banks of the ACT Module.
Step result: The list of .wav files appears to the right of the directory list.
- 4 To set the select directory as the default directory for the Tone Loader, click the **Set As Default Directory**.
Step result: The next time the Tone Loader is started, it displays the .wav files in the specified folder.
- 5 To select the preferred tones, left-click on the specific .wav files (using **Ctrl** or **Shift** to select multiple files) in the **Select Files** window on the right.
- 6 Click **Add Selected** to enable the selected files available as updateable tones.
Step result: The selected files appear in the **Select Tone** drop-down list.
- 7 Click **Add Dir** to enable all .wav files that are in the current selected directory available as updateable tones.
Step result: The files appear in the **Select** drop-down list.

Loading and Updating Tones

When and where to use:

Follow the procedure below to load/update tones into the ACT Module.

Procedure:

- 1 In the **Update Tones 1–10** area, use the scroll bar on the left to navigate between the ten different tone displays. Enable the Tone number to be updated by selecting the check box next to it.
Step result: The entry is enabled and the **Select Tone...** drop-down list to its right is enabled.
- 2 To check all boxes, click **A** (All Tones). To clear all boxes, click **N** (No Tones).
- 3 To select a new tone for a checked **Update Tone number>**, use the **Select Tone** drop-down list next to the **Update Tone number>**. If there is a checked Update Tone number> that does not have a selected .wav file, double-click a file name from the file list that is located in the **Select Files** window.
 - Use the **Select Tone** drop-down list.
 - If there is a checked **Update Tone Number** that does not have a selected .wav file, double-click a file name from the file list that is located in the **Select Files** window.
Step result: The selected .wav file name appears next to the **Tone number**.
- 4 Repeat *step 1* to *step 3* for all preferred Update Tone numbers.

- 5 Click **Record All Selected Tones** at the top left corner of the screen.

Step result: The progress of the recording (in percentage) is shown in the progress bar to the right of the button.

- 6 To reset the **Update Tone number>** box(es) to the default, click **Reset**.

Step result: The .wav files associated with the selected **Update Tone number>** box(es) are cleared.

- 7 To load a file list from a previously saved Tone Loader configuration (see *Saving the Tone Loader Configuration on page 166*), click **Load Saved Setup** on the bottom right corner of the screen and then select a file name from the list.

Step result: The progress of the load is displayed in the progress bar, next to the **Record All Selected Tones** button.

Saving the Tone Loader Configuration

When and where to use:

Follow the procedure below to save the current Tone Loader configuration for future sessions.

Procedure:

- 1 To save the current Tone Loader configuration, click the **Save Setup As...** button on the bottom right corner of the screen.
- 2 At the prompt, type in a name, or select one from the list, to overwrite a previous file, and click the **Save Setup** button.

Step result: The file is saved on the hard disk of your PC, for future use.

Using the ACT Communication Log

When and where to use:

The **ACT Communication Log** at the bottom of the **ACT Module Tester** screen displays all commands and responses sent over the Comm Line. The most recent message is highlighted. Follow the procedure below to use the ACT Communication Log.

Procedure:

- 1 Once the number of messages in the **ACT Communication Log** exceeds the log screen size, a scroll bar appears on the right side of the **ACT Communication Log**.
 - To enable scrolling using the scroll bar, click **Unlock**.
 - To disable scrolling, click **Lock**.

Step result: If the enable scrolling option was selected, the **Unlock** button turns into **Lock** and the scroll bar can be moved to view all messages in the **ACT Communication Log**. If the disable scrolling option was selected, the **Lock** button turns into **Unlock** and the scroll bar is locked and only the most recent messages are visible in the **ACT Communication Log**.

- 2 To clear the messages in the **ACT Communication Log**, click **Clear**.

Step result: All the messages in the **ACT Communication Log** are cleared.

Viewing the Online Help

When and where to use:

Follow the procedure below to view the online help file.

Procedure:

Select **Help → Content**.

Step result: The online help file opens.

Exiting the ACT Module Tester/Loader Utility

When and where to use:

Follow the procedure below to exit the ACT Module Tester/Loader Utility.

Process:

From the ACT Module Tester/Loader Utility, select **File** → **Exit**.

Chapter

7

FSA4000 Troubleshooting

This chapter provides fault management and troubleshooting information relating to the FSA4000 system.

Troubleshooting Using Software Diagnostics

The Software Diagnostics utility allows access through the communication (local or remote). Access each of the devices according to their logical names (the devices are created with a logical name). The status of each device at different levels of breakdown can be retrieved from the RTU. The RTU can also provide historical and statistical data on the device activities. The Software Diagnostics data is useful for system maintenance, problem identification for remote services and statistics data on the communication system performance. ACE3600 System Tools Suite (STS) with device “DCF6” uses the “SW Diagnostics And Loggers” utility.

Level	Description
<i>FEP</i>	
Level 20	Lists the FEP Diagnostic levels.
Level 33	Code Version and Build No.
Level 34	Lists the Talkgroup logging. It logs time stamp TG data, including the Alert ID.
Level 35	Same as level 34, but ERASES the Talkgroup logging after displaying it.
Level 36	Lists TG General information.
Level 40	General Information: CPU version, core version, and similar information.
Level 45	Logs and time stamps the number of times the ACE3600 OS does not accept the transmission frame buffer.
Level 46	TX Frames Data (time stamp, destination Site ID, and protocol type)
<i>Aux I/O</i>	
Level 38	Auxio Code Version Build No.
Level 48	Lists the Aux I/O flags information for each alert that is being sent, including time stamp and operations that were chosen, and similar information. May imply problems during an Aux I/O alert process.
Level 50	For Aux I/O systems which include a printer, lists the printer parsed information from the .dat file, as it is seen

Table continued...

	by the FEP. May imply parsing problems if there is a mismatch between the printer.dat file and this diagnostic.
<i>RTU</i>	
Level 20	Lists the RTU Diagnostic levels.
Level 30	Lists the alert broadcast logging. Logs and time stamp number of times RTU received alert broadcast packet(s). It provides data indicating if there is a communication issue.
Level 31	Lists the alert activation logging. Logs and time stamps alert data including sequence number, Alert ID, zone(s). In an apparatus system, it also logs alert tones.
Level 32	Lists the text broadcast logging. Logs and time stamps text message broadcast.
Level 33	Code Version and Build No.
Level 34	Lists the Talkgroup logging. It logs and time stamps TG data including the Alert ID.
Level 35	Same as level 34, but ERASES the Talkgroup logging after displaying it.
Level 39	Lists the SB9600 info from the RTU application point of view.
Level 40	General information. Lists the I/O modules connected to the ACE3600 RTU, CPU version, core version, etc.
Level 45	Lists the MOSCAD transmission error log. Logs and time stamps number of times ACE3600 OS not accepting transmission frame buffer.
Level 46	Tx Frames Data (time stamp, Dest Site, and Protocol Type)

Troubleshooting Using Error Logger Diagnostics

The Error Logger utility enables retrieving error messages logged in the RTU, relating to hardware and software malfunctions. Modules generate error messages to inform the system user of unusual events that take place in the system.

If many errors are expected, increase the file size. Once the file is full, no new messages can be added to the file. All excessive errors are lost. Retrieve and delete errors frequently using the Error Logger utility to avoid filling up the file.

The status of the Error Logger flash file can be monitored using the ErAlmostFull and ErFull flags in the system Reserved Flag table. Error messages from the logger flash file are also backed up on the STS PC hard drive for future reference.

Table 19: Levels and Description for Troubleshooting Using Error Logger Diagnostics

Levels	Description
FEP/RTU	

Table continued...

Levels	Description
Level 0	No Diagnostic Mode Level
Level 1	Critical Diagnostic Mode Level
Level 2	Medium Diagnostic Mode Level
Level 3	All Diagnostic Mode Level
Level 4	OS Buffer Mode Level
Level 5	Received Decode
Level 6	Zoning Debug
Level 7	Command Process Mode Level
Level 8	Received Data decoding
Level 9	Task Function Diagnostic Mode Level
Level 10	Send Buffer Data
<i>Level 4000</i>	<i>FSA4000 errors</i>
Level 4000	Level 4001-Level 4005 msg
Level 4001	DTS message
Level 4002	Input Mapping message
Level 4003	Single Alert message
Level 4004	RTU txt print message
Level 4005	Client message
Level 4006	Init interrogation message
Level 4007	Alerts
Level 4008	Short packet
Level 4100	Apparatuses + Aux I/O printer diagnostic level
Level 4500	ARTA Diagnostic level

Unlocking the Built-in or Default Administrative Account

When and where to use:

Follow the procedure below to unlock the built-in or default administrative account. This can happen, if a wrong password was entered too many times within a too short period. The specific number of times and period depend on the security configuration settings of the operating system, as set by applying the box-specific settings from the *Windows Supplemental CD*. Once the account is locked up, another administrative account can unlock it. On the AMC and ALC, such an account exists. It is normally reserved for Wonderware services and is not used interactively. It is the Wonderware MOSCAD services account.

**Note:**

In a Windows 2008 Server system, if an administrator password is required, enter the appropriate password for the default administrator account and click **Yes**. The default administrator account username is MotoSec.

In Windows Vista, if any information about the user access permissions appears, click **Continue**.

Procedure:

- 1 Log on to the Wonderware MOSCAD services account.
- 2 Right-click **My Computer**, and select **Manage**.
- 3 Expand the tree to select **Local Users and Groups**, and then the **Users** item.
- 4 Right-click the locked account, and select **Properties**.
- 5 Clear the **Account is locked out** and **Account is disabled** checkboxes.



Note: Also, depending on the security configuration required, **Password never expires** can be selected. If it is not selected, the password must be replaced periodically.

- 6 Log out of the Wonderware MOSCAD services account and log on again with the built-in or default administrative account or a normal user account needed for the applications.

Troubleshooting Using the Tx/Rx Monitor

Use the ACE3600 System Tools Suite (STS) for help in troubleshooting using the Tx/Rx monitor.

Chapter

8

FSA4000 Reference

This chapter contains supplemental reference information relating to the FSA4000 system.

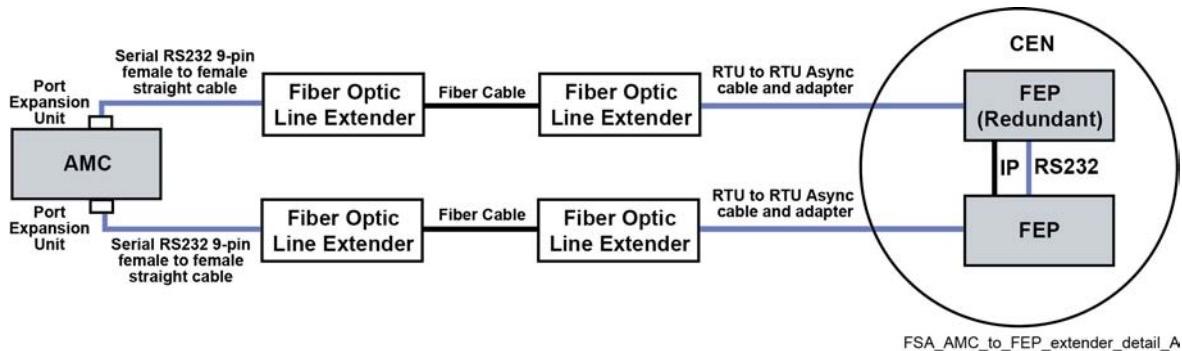
Fiber Optic Link

One Fiber Optic Link is required for each of the following:

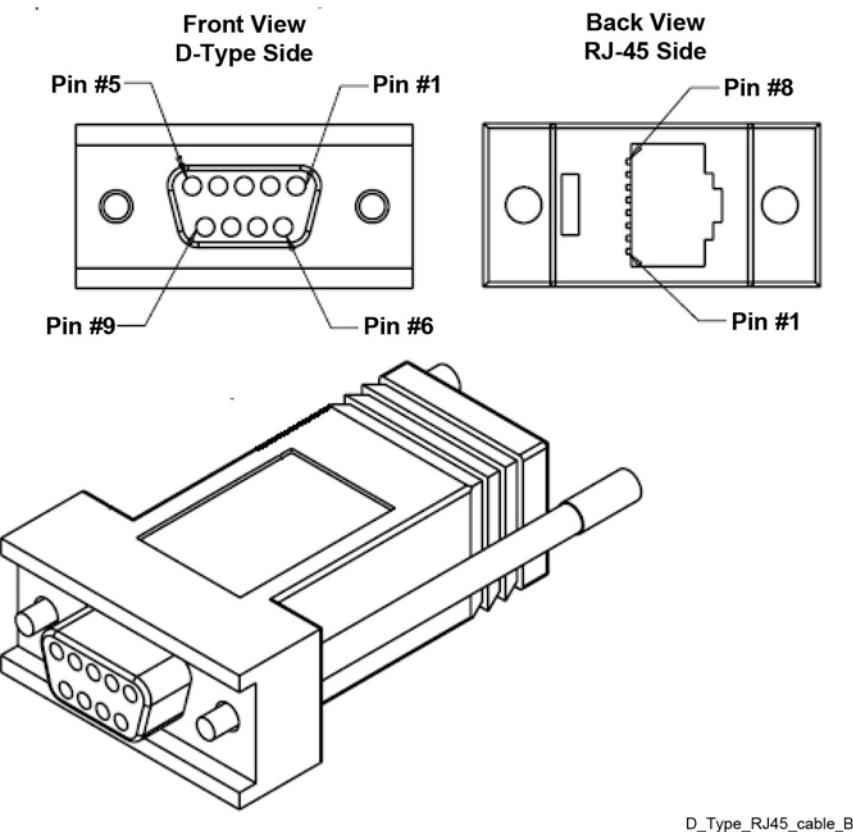
- FEP to AMC
- A redundant link from the FEP to the AMC
- FEP to the CAD server
- A redundant link from the FEP to the CAD server

The figure below shows the fiber optic link from the AMC to the FEP.

Figure 25: Fiber Optic Link

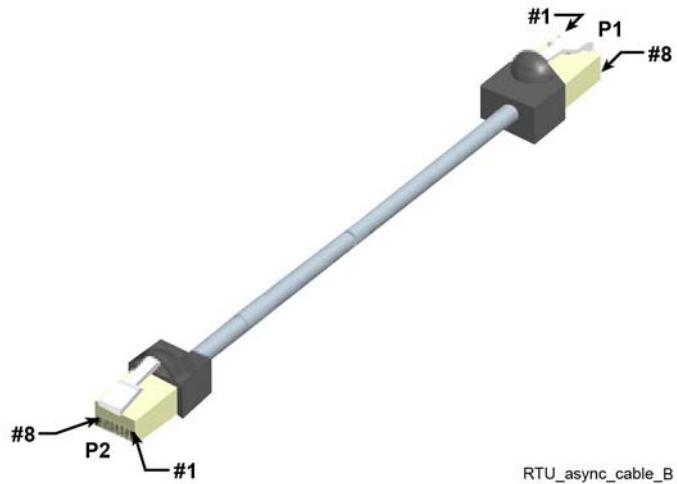


The figure below shows the D-Type to RJ45 Adapter. See [Pin Connections of the D-Type to RJ45 Adapter on page 175](#) for connection details.

Figure 26: D-Type to RJ45 Adapter

D_Type_RJ45_cable_B

The figure below shows the RTU to RTU async cable. See [RTU Async Cable Pin Connections on page 175](#) for the pin connections of the RTU to RTU async cable.

Figure 27: RTU to RTU Async Cable

RTU_async_cable_B

Fiber Optic Link Components

The table below describes each component of the link and details how many of each are required for specific connections.

Description	Important Instructions
B170 FC32 FibroLAN RS232 Fiber Optic Line Extender (RS232 DB9 to fiber extender 1310 nm, m/m 3 km, SC, internal PS)	One required per Fiber Optic Link to be used at the FEP side. The switch setting should be DTE (4 switches up). One Fiber Optic Link required per FEP to AMC, per second (Redundant) FEP to AMC, per FEP to CAD Server, and per second (Redundant) FEP to CAD Server.
B170 FC32 FibroLAN RS232 Fiber Optic Line Extender (RS232 DB9 to fiber extender 1310 nm, m/m 3 km, SC, internal PS)	One required per Fiber Optic Link to connect to the Port Expansion Unit. The switch setting should be DTE (4 switches up). One Fiber Optic Link required per FEP to AMC, per second (Redundant) FEP to AMC, per FEP to CAD Server, and per second (Redundant) FEP to CAD Server.
Fiber Optic cable of type: Multi Mode Fiber patch cord SC connectors, Exterior use	One required per Fiber Optic Link. One Fiber Optic Link required per FEP to AMC, per second (Redundant) FEP to AMC, per FEP to CAD Server, and per second (Redundant) FEP to CAD Server.
Serial RS232 9-pin female to female strait cable	One required per Fiber Optic Link to be connected to port expansion unit. One Fiber Optic Link required per FEP to AMC, per second (Redundant) FEP to AMC, per FEP to CAD Server, and per second (Redundant) FEP to CAD Server.
RTU to RTU Async cable and adapter (see wiring diagram and drawings below)	One required per Fiber Optic Link to be connected to the FEP. One Fiber Optic Link required per FEP to AMC, per second (Redundant) FEP to AMC, per FEP to CAD Server, and per second (Redundant) FEP to CAD Server.

Pin Connections of the D-Type to RJ45 Adapter

The following table shows the pin connections of the D-Type to RJ45 adapter

Table 20: D-Type to RJ45 Adapter – Pin Connections

PIN# RJ45	PIN# D-TYPE	NOTE
8	2	WHITE
7	3	BROWN
2	6	ORANGE
6	4	YELLOW
5	5	GREEN
1	8	BLUE
4	7	RED
3	1	BLACK
N/A	9	NOT CONNECTED

RTU Async Cable Pin Connections

The table below shows the P1 RJ45 to P2 RJ45 pin connections.

Table 21: RTU to RTU Async Cable – Pin Connections

P1 RJ45	P2 RJ45
PIN #1	PIN #2
PIN #2	PIN #1
PIN #3	PIN #8
PIN #4	PIN #4
PIN #5	PIN #6
PIN #6	PIN #5
PIN #7 NOT CONNECTED	PIN #1 NOT CONNECTED
PIN #8	PIN #3

Chapter

9

FSA4000 Disaster Recovery

This chapter contains information on how to recover the FSA4000 devices of the ASTRO® 25 radio communications system.

Alerting Master Computer (AMC) Disaster Recovery

The Alerting Master Computer (AMC) is a computer that is equipped with a Windows platform and the InTouch software (FSA4000 Dispatch Software.) This section provides information on recovering the AMC as part of disaster recovery.

Recovering the AMC

When and where to use:

Follow the process below to recover the AMC.

Process:

- 1 Perform backups before re-installing software. See *Recovering the AMC — Pre-Install Backups on page 177*.



Note: If disaster recovery requires hardware replacement, it should be done at this stage.

- 2 Install applicable applications. See *Recovering the AMC – Installation and Configuration on page 178*.

Recovering the AMC — Pre-Install Backups

When and where to use:

Follow the process below to perform pre-install backups as part of recovering the AMC.



Note: Perform the steps in this process only if the device is still accessible and the option or feature is in use.

Process:

- 1 In a K-core system, back up the local hosts file. See *Backing Up the Local Hosts File on page 183*.
- 2 In a K-core system, back up the NTP configuration. See *Backing Up the NTP Configuration on page 183*.
- 3 Back up the FSA4000 Configuration Tool projects. See *Backing Up the FSA4000 Configuration Tool Projects on page 184*.
- 4 Back up the FSA4000 Dispatch Software run-time configuration. See *Backing Up the FSA4000 Dispatch Software Run-Time Configuration on page 185*.
- 5 Back up the Wonderware license file. See *Backing Up the Wonderware InTouch License and SCADALarm License File on page 186*.
- 6 Back up the FSA4000 Report Generator configuration. See *Backing Up the FSA4000 Report Generator Configuration Files on page 186*.

- 7 Back up the FSA4000 Dispatch Software configuration. See [Backing Up the FSA4000 Dispatch Software Configuration on page 187](#).
- 8 Back up the Alarm DB Logger Configuration. See [Backing Up the Alarm DB Logger Configuration on page 187](#).
- 9 Back up the Historical Alarms Database. See [Backing Up the Historical Alarms Database on page 188](#).
- 10 Copy the database backup file. See [Copying the Database Backup File on page 189](#).
- 11 Back up the SCADAlarm configuration. See [Backing Up the SCADAlarm Configuration on page 189](#).
- 12 Back up the InTouch Alarm Printing Option configuration. See [Backing Up the InTouch Alarm Printing Option Configuration on page 190](#).
- 13 Back up the Windows screen resolution. See [Backing Up the Windows Screen Resolution on page 191](#).
- 14 Unlock and lock the HP Switch Port. Refer to the *MAC Port Lockdown* manual.

Recovering the AMC – Installation and Configuration

When and where to use:

Follow the process below to install and configure the AMC as part of the overall disaster recovery process.

Process:

- 1 Install Windows Server 2008 R2 Standard Edition (x64) SP1 or Windows Server 2003 R2 Standard Edition with SP2, using MOSI. See [Installing Windows Server Using MOSI on page 74](#).
- 2 Configure the Windows operating system. See [Configuring the Windows Operating System on page 77](#).
- 3 Install the external modem drivers. See [Installing External Modem Drivers on page 75](#).
- 4 Install the Digi EdgePort USB driver. See [Installing the Digi EdgePort USB Driver On Windows Server 2003 on page 75](#) or [Installing the Digi EdgePort USB Driver On Windows Server 2008 on page 76](#).
- 5 Install the Port Expansion Unit USB serial hub driver. See [Installing the Port Expansion Unit USB Serial Hub Driver on page 79](#).
-  **Note:** This procedure is for Disaster Recovery of an AMC which was upgraded to ASTRO® 25 7.11, and remained with Windows Server 2003 R2 OS.
- 6 Install Microsoft SQL Server 2005 Standard Edition with Service Pack 3. See [Installing Microsoft SQL Server 2005 Standard Edition on page 80](#).
- 7 Install the Wonderware ModbusSerial DAServer. See [Installing the Wonderware ModbusSerial DAServer on page 81](#).
- 8 Install the Wonderware DAServer Runtime components upgrade. See [Installing the Wonderware DAServer Runtime Components Upgrade on page 82](#).
- 9 Install Wonderware InTouch. See [Installing Wonderware InTouch on page 84](#).
- 10 Install Wonderware SCADAlarm. See [Installing Wonderware SCADAlarm on page 86](#).
- 11 Install the Wonderware SCADAlarm Patch. See [Installing the Wonderware SCADAlarm Patch on page 87](#).
- 12 Install the Wonderware SCADAlarm license file. See [Installing the Wonderware SCADAlarm License File](#).
- 13 Configure the Wonderware InTouch Alarm DB Logger. See [Configuring the Wonderware InTouch Alarm DB Logger on page 88](#).
- 14 Install the FSA4000 users and groups. See [Installing FSA4000 Users and Groups on page 90](#).
- 15 Install the InTouch configuration. See [Installing the InTouch Configuration on page 91](#).
- 16 Install the FSA4000 Dispatch Software. See [Installing the FSA4000 Dispatch Software Application on page 93](#).
- 17 Configure the Wonderware ModbusSerial DAServer for FSA4000 Dispatch Software. See [Configuring the Wonderware ModbusSerial DAServer for FSA4000 Dispatch Software on page 94](#).
- 18 Install the SQL Server 2005 Configuration. See [Installing SQL Server 2005 Configuration on page 95](#).
- 19 Install the FSA4000 Report Generator. See [Installing the FSA4000 Report Generator on page 96](#).
- 20 Install ACE3600 System Tools Suite 10.50. See [Installing ACE3600 System Tools Suite \(STS\) 10.50 on page 97](#).
- 21 Install the FSA4000 Configuration Tool. See [Installing the FSA4000 Configuration Tool on page 98](#).

- 22 Install the FSA4000 Configuration Tool InTouch AMC server license. See *Installing the FSA4000 Configuration Tool InTouch AMC Server License on page 99*.
- 23 Install the FSA4000 Configuration Tool InTouch ALC client license. See *Installing the FSA4000 Configuration Tool InTouch ALC Client License on page 99*.
- 24 Install the FSA4000 Configuration Tool CAD interface license. See *Installing the FSA4000 Configuration Tool CAD Interface License on page 100*.
- 25 Install the FSA4000 Configuration Tool Redundant/Dual FEP license. See *Installing the FSA4000 Configuration Tool Redundant/Dual FEP Option License on page 101*.
- 26 Install the FSA4000 Configuration Tool Apparatus License. See *Installing the FSA4000 Configuration Tool Apparatus License on page 102*.
- 27 Install the FSA4000 Configuration Tool ARTA License. See *Installing the FSA4000 Configuration Tool ARTA License on page 103*.
- 28 Uninstall the ACE3600 System Tools Suite (STS). See *Uninstalling the ACE3600 System Tools Suite (STS) on page 104*.
- 29 Install the ACE3600 System Tools Suite. See *Installing the ACE3600 System Tools Suite (STS) on page 105*.
- 30 Install the ACE3600 System Tools Suite Service Pack. See *Installing the ACE3600 System Tools Suite Service Pack on page 105*.
- 31 Install the FSA4000 Configuration Tool Upgrade. See *Installing the FSA4000 Configuration Tool Upgrade on page 106*.
- 32 Remove old FSA4000 Configuration Tool components. See *Removing Old FSA4000 Configuration Tool Components on page 107*.
- 33 Install FSA4000 Core Applications. See *Installing FSA4000 Core Applications on page 108*.
- 34 Install the Event Logging Client using the Windows Install Framework application. Refer to the *Centralized Event Logging* manual.



Note: This procedure is not applicable for K—core systems.

- 35 Configure the Windows Event Logging Client. Refer to the “Configuring Windows Event Logging Clients” section of the *Centralized Event Logging* manual.
- 36 If the operating system is Windows Server 2008, perform the following tasks from the *SNMPv3* manual.
 - 1 “Installing Configuration Utility for Windows”
 - 2 “Installing the SNMPv3 Services”
 - 3 “Installing the SNMPv3 Common Agent Software”
 - 4 “Configuring the SNMPv3 Agents”
- 37 Install Adobe Reader by following the instructions provided with the ASTRO® 25 system documentation media. Your system must have Adobe® Reader® and a web browser installed to access the documentation.

Note: SNMPv3 Common Agent is supported only on Windows Server 2008 R2 for replacement of IP ping with SNMP get.
- 38 If the operating system is Windows Server 2003, install Remote Desktop updates. See the “Applying Remote Desktop Updates for Windows XP, Windows Server 2003, and Windows Vista” section in the *Windows Supplemental Configuration* manual.
- 39 If the operating system is Windows Server 2003, start NetMeeting. See the “Starting NetMeeting on Windows Server 2003 and Windows XP SP1-2” section of the *Windows Supplemental Configuration* manual.
- 40 Set the boot order (IA customers only). Refer to the “Setting the Boot Order for Windows Devices (Not for Virtual Machines)” section in the *Windows Supplemental Configuration* manual.
- 41 Install MOTOPATCH. See *Installing Patches from the MOTOPATCH for Windows OS CD on page 109*.

**Note:**

This requirement does not apply to K-core systems.

Make sure all MOTOPATCH CDs are included, for:

- Operating system software
- SP1 upgrade CD for Windows Server 2008
- Third-party applications

OS patching must be performed after patching third-party applications.

42 Install MOTODST locally. See *Installing MOTODST Locally on page 111*.

43 Install the Windows operating system configuration. Refer to “Applying Device-Specific Settings Using the Windows Supplemental CD” in the *Windows Supplemental Configuration* manual.



Note: The procedure is obligatory for K-core systems. For all other systems, you may decide NOT to perform this procedure to avoid the lengthy reboot time. However, it must be acceptable within your organizations policy to rely on the configuration being provided by Group Policy Objects on the domain controllers.

44 For Windows Server 2008, change the default Windows logon banner locally to customize it for your organization. Refer to “Changing Logon Banners Locally” in the *Windows Supplemental Configuration* manual.

45 Restore the FSA4000 Configuration Tool projects. See *Restoring the FSA4000 Configuration Tool Projects on page 196*.

46 Restore the Wonderware InTouch license file. See *Restoring the Wonderware License File on page 192*.

47 Restore the FSA4000 Dispatch Software configuration. See *Restoring the FSA4000 Dispatch Software Configuration on page 193*.

48 Restore the FSA4000 Apparatus configuration. See *Restoring the FSA4000 Dispatch Software Run-time Configuration on page 194*.

49 Restore the FSA4000 Report Generator configuration files. See *Restoring the FSA4000 Report Generator Configuration on page 195*.

50 Restore the SCADAlarm configuration. See *Restoring the SCADAlarm Configuration on page 192*.

51 Restore the InTouch Alarm Printing option configuration. See *Restoring the InTouch Alarm Printing Option on page 196*.

52 Configure the InTouch Alarm Printing option. See *Configuring the InTouch Alarm Printing Option on page 112*.

53 Re-configure the Wonderware InTouch alarm DB logger. See *Re-Configuring Wonderware InTouch Alarm DB Logger on page 116*.

54 Configure the MDLC formatted buffer size for the FSA4000 Configuration Tool. See *Configuring the MDLC Formatted Buffer Size for the FSA4000 Configuration Tool on page 117*.

55 Configure the FSA4000 Alerting Center computers. See *Configuring the FSA4000 Alerting Center Computers on page 118*.

56 Configure the FSA4000 Apparatuses. See *Configuring the FSA4000 Apparatuses on page 118*.

57 Configure talkgroups for data radios. Use the CPS (Customer Programming Software) to program the talkgroups in the subscriber radios.

**Note:**

This configuration must be performed locally, in the fire station where the equipment is located.

Perform this procedure only for FSA4000 ARTA expansion.

58 Recreate the CSV file. See *Creating the CSV File on page 120*.

59 Load the FSA4000 InTouch database. See *Loading the FSA4000 InTouch Database on page 121*.

60 Configure the MDLC formatted buffer size for STS. See *Configuring the MDLC Formatted Buffer Size for the ACE3600 STS on page 122*.

61 In K-core systems, if no backup of the previous local hosts file is available, configure the local hosts file. See *Configuring the Local Hosts File on page 124*.

- 62 Install the FSA4000 RTUs. See the *ACE3600 RTU Owner's Manual*.
- 63 Install the FSA4000 Redundant FEP (if it exists) or the Main FEP (if a Redundant FEP does not exist), see the *ACE3600 RTU Owner's Manual*.
- 64 For FSA4000 Apparatuses, configure the ACT modules. See the *FSA4000 Audio Control Tone (ACT) Module Owners Manual*.
- 65 In a K-core systems, if no backup of the previous NTP configuration is available, configure the NTP. See *Configuring Network Time Protocol (NTP) on page 125*.
- 66 In K-core systems, if a backup of the previous local hosts file is available, restore the local hosts file. See *Restoring the Local Hosts File on page 197*.
- 67 In K-core systems, if a backup of the previous NTP configuration is available, restore the NTP. See *Restoring NTP on page 198*.
- 68 Install Centralized Authentication. Refer to “Joining and Rejoining a Windows-Based Device to an Active Directory Domain Using a Script” and, in Windows Server 2003, “Removing Local Accounts from Windows XP and Windows Server 2003 Devices” in the *Authentication Services* manual.
- 69 Start the FSA4000 Dispatch Software. See *Starting the FSA4000 Dispatch Software on page 126*.
- 70 Perform the disaster recovery process on ALCs and FSA4000 Client Software that cohabitantes on consoles. See *Alerting LAN Computer (ALC) – Disaster Recovery on page 181*.
- 71 If the redundant FSA4000 FEP option is used, perform the following actions:
 - a) Switch the AMC to the redundant FSA4000 FEP, See *Switching the AMC to the Redundant FSA4000 FEP on page 126*.
 - b) Perform the disaster recovery process on the FSA4000 Main FEP. See *Recovering the FSA4000 Front-End Processor (FEP) and FSA4000 Remote Terminal Unit (RTU) on page 199*.
 - c) Switch the AMC to the main FSA4000 FEP, See *Switching the AMC to the Main FSA4000 FEP on page 126*.

Alerting LAN Computer (ALC) – Disaster Recovery

The Alerting LAN Computer (ALC) is a Windows PC that is equipped with InTouch Runtime Software and the FSA4000 Dispatch Software. This section provides information on recovering the ALC as part of disaster recovery.

Recovering the ALC

When and where to use:

Follow the process below to recover the ALC.



Note: Perform the steps in this procedure only if the device is still accessible and the option or feature is in use.

Process:

- 1 In a K-core system, back up the local hosts file. See procedure *Backing Up the Local Hosts File on page 183*.
- 2 In a K-core system, back up the NTP configuration. See *Backing Up the NTP Configuration on page 183*.
- 3 Back up the Wonderware license file. See *Backing Up the Wonderware InTouch License and SCADAlarm License File on page 186*.
- 4 Back up the FSA4000 Report Generator configuration. See *Backing Up the FSA4000 Report Generator Configuration Files on page 186*.
- 5 Back up the FSA4000 Dispatch Software configuration. See *Backing Up the FSA4000 Dispatch Software Configuration on page 187*.
- 6 Back up the Windows screen resolution. See *Backing Up the Windows Screen Resolution on page 191*.
- 7 Unlock and lock the HP Switch Port. Refer to the *MAC Port Lockdown* manual.

- 8 Install Microsoft Windows Vista Business Edition with SP2 or Microsoft Windows 7 with SP1, using MOSI. See [Installing Windows Server Using MOSI on page 74](#).



Note: If disaster recovery requires hardware replacement, it should be done at this stage.

- 9 Configure the Windows operating system. See [Configuring the Windows Operating System on page 77](#).
- 10 Install Wonderware InTouch. See [Installing Wonderware InTouch on page 84](#).
- 11 Install the FSA4000 users and groups. See [Installing FSA4000 Users and Groups on page 90](#).
- 12 Install the InTouch configuration. See [Installing the InTouch Configuration on page 91](#).
- 13 Install the FSA4000 Dispatch Software. See [Installing the FSA4000 Dispatch Software Application on page 93](#).
- 14 Install the FSA4000 Report Generator. See [Installing the FSA4000 Report Generator on page 96](#).
- 15 Install the Event Logging Client using the Windows Install Framework application. Refer to the *Centralized Event Logging* manual.



Note: This procedure is not applicable for K-core systems.

- 16 In systems with Dynamic System Resilience, or when ZCP exists, configure the Windows Event Logging Client. Refer to “Configuring Windows Event Logging Clients” in the *Centralized Event Logging* manual.
- 17 Install Adobe Reader by following the instructions provided with the ASTRO® 25 system documentation media. Your system must have Adobe® Reader® and a web browser installed to access the documentation.
- 18 Start NetMeeting. See the “Starting NetMeeting on Windows Server 2003 and Windows XP SP1-2” section of the *Windows Supplemental Configuration* manual.
- 19 Set the boot order. Refer to the “Setting the Boot Order for Windows Devices (Not for Virtual Machines)” section in the *Windows Supplemental Configuration* manual.
- 20 Install MOTOPATCH. See [Installing Patches from the MOTOPATCH for Windows OS CD on page 109](#).



Note: This requirement does not apply to K-core systems.

- 21 Install MOTODST locally. See [Installing MOTODST Locally on page 111](#).
- 22 Install the common Windows operating system configuration. Refer to “Applying Device-Specific Settings Using the Windows Supplemental CD” in the *Windows Supplemental Configuration* manual.
- 23 Change the Windows logon banner locally to customize it for your organization. Refer to “Changing Logon Banners Locally” in the *Windows Supplemental Configuration* manual.
- 24 Restore the Wonderware InTouch license file. See [Restoring the Wonderware License File on page 192](#).
- 25 Restore the FSA4000 Dispatch Software configuration. See [Restoring the FSA4000 Dispatch Software Configuration on page 193](#).
- 26 Restore the FSA4000 Report Generator configuration. See [Restoring the FSA4000 Report Generator Configuration on page 195](#).
- 27 Configure the Alerting Center Computers. See [Configuring the FSA4000 Alerting Center Computers on page 118](#).
- 28 In K-core systems, if no backup of the previous local hosts file is available, configure the local hosts file. See [Configuring the Local Hosts File on page 124](#).
- 29 In K-core systems, if no backup of the previous NTP configuration is available, configure the NTP. See [Configuring Network Time Protocol \(NTP\) on page 125](#).

- 30 If it was backed up, restore the local hosts file. See [Restoring the Local Hosts File on page 197](#).
- 31 If it was backed up, restore the NTP. See [Restoring NTP on page 198](#).
- 32 Load the FSA4000 InTouch database. See [Loading the FSA4000 InTouch Database on page 121](#).
- 33 Install Centralized Authentication. Refer to the “Joining and Rejoining a Windows-Based Device to an Active Directory Domain Using a Script” and “Removing Local Accounts from Windows XP and Windows Server 2003 Devices” in sections in the *Authentication Services* manual.
- 34 Start the FSA4000 Dispatch Software. See [Starting the FSA4000 Dispatch Software on page 126](#).

AMC and ALC Disaster Recovery Procedures

This section contains the maintenance procedures used in the disaster recovery process to back up and restore AMC and ALC. See the disaster recovery processes under [FSA4000 Disaster Recovery on page 177](#).

Backing Up the Local Hosts File

When and where to use:

Follow the procedure below to back up the local hosts file.



Note:

This procedure is for K-core systems only.

While performing this procedure, you must be logged on locally to the AMC as motosec, or to the ALC and consoles as secmoto.

Save the backup files either on a network location that is accessible during disaster recovery process or removable media which is allowed by the organizations IA policies.

Procedure:

- 1 Navigate to the following location: %SystemRoot%\system32\drivers\etc\
- 2 Click the hosts file and press **Ctrl + C**.
- 3 Navigate to the location where you want to store the file.
- 4 Press **Ctrl + V**.



Note: If the User Account Control dialog box appears, type the administrator user name and password, if required, and click **Yes**. Use the username you logged on with as the administrator user name.

Backing Up the NTP Configuration

When and where to use:

Follow the procedure below to back up the NTP configuration.



Note:

This procedure is for K-core systems only.

While performing this procedure, you must be logged on locally to the AMC as motosec, or to the ALC and consoles as secmoto.

Save the backup files either on a network location that is accessible during the disaster recovery process or on removable media which is allowed by the organizations IA policies.



Note: If the User Account Control dialog box appears, type the administrator user name and password, if required, and click **Yes**. Use the username you logged on with as the administrator user name.

Procedure:

- 1 Open the **Date and Time** window:
 - If the operating system is Windows 2008, from the **Start** menu, select **Control Panel**. Click **Clock, Region and Language**. Click **Date and Time**.
 - If the operating system is Windows 7, from the **Start** menu, click **Control Panel**. Click **Clock, Language, and Region**, and click **Date and Time**. If the Control Panel is in classic view, click **Control Panel Home** first.
 - If the operating system is Windows Vista, from the **Start** menu, click **Control Panel**. Double-click **Date and Time**. If the Control Panel is in classic view, click **Control Panel Home** first.
- 2 In the **Date and Time** window, select the **Internet Time** tab. On all operating systems except Windows 2003, click **Change settings....**
 -  **Note:** If the User Account Control dialog box appears, click **Continue**, or provide the administrator user name and password and click **Yes**. Use the username you logged in with as the administrator user name.
- 3 In the **Internet Time Settings** window, copy the NTP settings:
 - a) Press **Alt + PrintScreen**.
 - b) Press **Ctrl + Esc**.
 - c) Type wordpad in the **Search** field. Press **Enter**.
 - d) Press **Ctrl + V** to paste the copied settings screen.
 - e) Select **File → Save** and navigate to the backup location.
 - f) Enter file name: **NTP_settings.rtf** and click **Save**.
 - g) Select **File → Exit**.
- 4 Click **Cancel** to close the **Internet Time Settings** window.
- 5 Click **Cancel** to close the **Date and Time** window.

Backing Up the FSA4000 Configuration Tool Projects

When and where to use:

Follow the procedure below to back up FSA4000 Configuration Tool projects.



Note:

This procedure is for the AMC and for FSA4000 Aux I/O systems.

While performing this procedure, you must be logged on locally as motosec.

Save the backup files either on a network location that is accessible during the upgrade/disaster recovery process or removable media which is allowed by the organizations IA policies.

Procedure:

- 1 Close all applications.
- 2 Navigate to the FSA4000 folder on the AMC server:
 - On Windows 2003, go to **C:\Program Files\Motorola\PublicSafety\Fire\FSA4000\FSA4000_xxx**.
 - On Windows 2008, go to **C:\Program Files (x86)\Motorola\PublicSafety\Fire\FSA4000\FSA4000_xxx**.



Note: The **xxx** in the folder name stands for FSA4000 Configuration Tool version. If there are multiple **FSA4000_xxx** folders, select the latest version folder (a folder with the highest **xxx** value).

- 3 Select the Projects folder and press **Ctrl + C**.



Note: The Projects folder is selected to safely copy and paste an entire set of projects.

- 4 Navigate to the backup location where you want to store the folder.

- 5 Select the directory where you want to copy the Projects folder and press **Ctrl + V**.



Note: Record the location of this folder.

Backing Up the FSA4000 Dispatch Software Run-Time Configuration

When and where to use:

Follow the procedure below to back up the FSA4000 Dispatch Software run-time configuration.



Note:

This procedure is for AMC only.

For FSA4000 Apparatuses systems only.

While performing this procedure, you must be logged on locally as motosec

Save the backup files either on a network location that is accessible during upgrade/disaster recovery process or removable media which is allowed by the organizations IA policies.

Procedure:

- 1 Select Start → Programs/All Programs → Wonderware → InTouch.

- 2 If the InTouch application is run for the first time, do the following:

- a) When the InTouch Application Manager displays a message that this is the first time it is being run, click **Next**.
- b) When you are prompted to select a starting directory, navigate to the correct folder, and click **OK**.
 - If the operating system is Windows Server 2003, the folder is C:\Program Files\motorola\publicsafety\fire\dispatch\fsa4000_intouch.
 - If the operating system is Windows Server 2008, the folder is C:\Program Files (x86)\motorola\publicsafety\fire\dispatch\fsa4000_intouch.
- c) Click **Finish**.

- 3 In the Application Manager, select the required entry and select File → DBDump.



Note: If the entry does not exist, select Tools → Find Applications, navigate to the fsa4000_intouch folder, and click **OK**.

- 4 In the **CSV File to Dump To** dialog box, navigate to the fsa4000_intouch folder and specify the file name DB.CSV. Click **OK**.



Note: If a message appears asking you to confirm overwriting an existing file, click **Yes**.



Note: The dump process may take a few minutes.

- 5 When the dump successful message appears, click **OK**.

- 6 Navigate to the fsa4000_intouch folder.

- 7 Copy the DB.csv file to a backup location:

- a) Navigate to the fsa4000_intouch folder.
- b) Click the DB.csv file and press **Ctrl + C**.

- c) Navigate to the backup location where you want to store the file and press **Ctrl + V**.

Backing Up the Wonderware InTouch License and SCADAlarm License File

When and where to use:

Follow the procedure below to back up the Wonderware InTouch license and the SCADAlarm License File.



Note:

This procedure performs backup of the InTouch license and also the SCADAlarm license if the FSA4000 Alarm Paging option was installed.

While performing this procedure, you must be logged on locally to the AMC as motosec, or to the ALC and consoles as secmoto.

Save the backup files either on a network location that is accessible during upgrade/disaster recovery process or removable media which is allowed by the organizations IA policies.

Procedure:

- 1 Navigate to the license file folder.

- If you are backing up on Windows 2008 or Windows 7, navigate C:\Program Files (x86)\Common Files\ArchestrA\License.
- If you are backing up on Windows 2003 or Windows Vista, navigate to C:\Program Files\Common Files\ArchestrA\License.



Note: If a message appears saying that these files are hidden, allow showing the contents of the folder.

- 2 Select the WWSUITE.LIC file and press **Ctrl + C**.

- 3 Navigate to a network location where you want to back up the license and press **Ctrl + V**.

- 4 Right-click the copied WWSUITE.LIC file in the backup location and select **Rename**.

- 5 Change the file name to WWSUITE_10.1.LIC. Press **Enter**.

Backing Up the FSA4000 Report Generator Configuration Files

When and where to use:

Follow the procedure below to back up FSA4000 Report Generator configuration files.



Note:

While performing this procedure, you must be logged on locally to the AMC as motosec, or to the ALC and consoles as secmoto.

It is required to save the backup files either on a network location that is accessible during upgrade/disaster recovery process or removable media which is allowed by the organizations IA policies.

Procedure:

- 1 Navigate to the FSA4000 Report Generator folder:

- If you are on Windows 2008, Windows Vista, or Windows 7, open the **Start** menu and type %AllUsersProfile%\FSA4000 Report Generator in the Search field. Press **Enter**.
- If you are on Windows 2003, press **Windows icon key + R** and type: %AllUsersProfile%\Application Data\FSA4000 Report Generator Click **OK**.

- 2 Back up the configuration files:

- a) In the FSA4000 Report Generator folder, select the `FsaRepGenConf.xml` and `FsaRepGenData.xml` files and press **Ctrl + C**.
- b) Navigate to the backup location.
- c) Select the directory where you want to copy the files.
- d) Press **Ctrl + V** to paste the files.



Note: Multiple files can be selected by clicking them while holding **Ctrl** key.

- 3 Close the Windows Explorer.

Backing Up the FSA4000 Dispatch Software Configuration

When and where to use:

Follow the procedure below to back up the FSA4000 Dispatch Software configuration.



Note:

- While performing this procedure, you need to be logged on locally to the AMC as motosec, or to the ALC and consoles as secmoto.
- Save the backup files either on a network location that is accessible during upgrade/disaster recovery process, or removable media which is allowed by the organization's IA policies.

Procedure:

- 1 Close all applications.
- 2 Navigate to the `FSA4000_InTouch` folder on the AMC or ALC:
 - If you are on Windows 2003, Windows XP or Windows Vista, navigate to `C:\Program Files\Motorola\Public Safety\Fire\Dispatch\FSA4000_InTouch\`.
 - If you are on Windows 2008 or Windows 7, navigate to `C:\Program Files (x86)\Motorola\PublicSafety\Fire\Dispatch\FSA4000_InTouch\`.
- 3 Select the Data folder and press **Ctrl + C**.
- 4 Navigate to the backup location where you want to store the folder.
- 5 Press **Ctrl + V**.

Backing Up the Alarm DB Logger Configuration

When and where to use:

Follow the procedure below to back up the Alarm DB Logger configuration.



Note:

This procedure is for AMC only.

This procedure is for systems with the FSA4000 Alarm Printing option only.

While performing this procedure, you need to be logged on locally to the AMC as motosec.

Save the backup files either on a network location that is accessible during upgrade/disaster recovery process or removable media which is allowed by the organization's IA policies.

Procedure:

- 1 From the **Start** menu, select **Programs/All Programs → Wonderware → InTouch → Alarm DB Logger Manager**.
- 2 Open the **Alarm DB Logger Manager - Configuration** dialog box:
 - If the **Settings** button is enabled, click **Settings**.
 - If the **Settings** button is disabled, click **Stop** and then click **Settings**.
- 3 Press **Alt + PrintScreen**.

4 Open Wordpad:

- If you are on Windows 2003 or Windows XP, press **Ctrl + Esc**, press the **Windows icon key + R**, and type **wordpad** in the **Open** field. Press **Enter**.
- If you are on Windows 2008, Windows Vista, or Windows 7 system, press **Ctrl + Esc**, type **wordpad** in the **Search** field. Press **Enter**.

Step result: The WordPad application window appears.

5 Save the settings in the Wordpad file:

- a) Press **Ctrl + V** to paste the copied settings screen.
- b) Select **File → Save**. Navigate to the backup location.
- c) Enter file name: **Logging_Mode.rtf** and click **Save**.
- d) Select **File → Exit**.

Backing Up the Historical Alarms Database

When and where to use:

Follow the procedure below to back up the Historical Alarms Database.



Note:

- This procedure is for AMC only.
- This procedure is for systems with the FSA4000 Alarm Printing option only.
- While performing this procedure, you must be logged on locally to the AMC as motosec.
- Save the backup files either on a network location that is accessible during upgrade/disaster recovery process, or removable media which is allowed by the organizations IA policies.

Procedure:

- 1 From the **Start** menu, select **Programs/All Programs → Wonderware → InTouch → Alarm DB Logger Manager**.
 - 2 In the **Alarm DB Logger Manager** dialog box, if the **Stop** button is enabled, click **Stop**.
 - 3 Select the open **FSA4000 Report Generator** icon on the taskbar.
 - 4 In the **Report Generator** window, select **File → Exit**.
- Step result:** The Report Generator window closes and the connection stops.
- 5 Select **Start → Programs/All Programs → Microsoft SQL Server 2005 → SQL Server Management Studio**.
- Step result:** The **SQL Server Management Studio** main window with **Connect to Server** pop-up window appears.
- 6 To connect to the Server, perform the following actions:
 - a) Select **Database Engine** for **Server type**.
 - b) Enter **localhost** for **Server name**.
 - c) Select **Windows Authentication** for **Authentication**. Click **Connect**.
 - 7 To navigate to the database on the local Microsoft SQL Server, in the Object Explorer navigation pane, click the **localhost** folder. Click **Databases**.



Note: If you do not see **localhost**, use the folder with the name of your server computer instead.

- 8 Right-click **WWALMDB** and select **Tasks → Back Up**.
 - 9 In the **Back Up Database** window, for each item under the **Destination** list, select the item and click **Remove**.
- Step result:** All existing destinations are removed.
- 10 Click **Add**.
 - 11 In the **Select Destination** dialog box, perform the following actions:

- a) Select the **File name** option.
- b) In the **File name** box, enter the path to the backup file and the file name: D:\Program Files\Microsoft SQL Server\MSSQL.1\MSSQL\Backup\WWALMDB.bak



Note: You cannot use the **More** button to browse the folder. Enter the path manually in the **File name** box.

12 Click **OK**.

Step result: The Select Destination dialog box closes.

13 Perform the following actions:

- a) Select the **Options** tab.
- b) Select **Overwrite all existing backup sets**.
- c) Click **OK**.



Note: Database backup can take several minutes.

14 When a message appears, saying that the backup of the WWALMDB database completed successfully, click **OK**.

15 Select **File → Exit**.

Step result: The SQL Server Management Studio window closes.

Copying the Database Backup File

When and where to use:

Follow the procedure below to copy the database backup file.



Note: Save the backup files either on a network location that is accessible during upgrade/disaster recovery process or removable media which is allowed by the organizations IA policies.

Procedure:

- 1 Navigate to the following location: D:\Program Files\Microsoft SQL Server\MSSQL.1\MSSQL\Backup\
- 2 Select the WWALMDB.bak from the Data folder and press **Ctrl + C**.
- 3 Navigate to the network location. Select the directory where you want to copy the .bak file and press **Ctrl + V**.



Note: This .bak file can be a very large file.

Backing Up the SCADAlarm Configuration

When and where to use:

Follow the procedure below to back up the SCADAlarm configuration.

**Note:**

- This procedure is for the AMC only.
- This procedure is for systems with the FSA4000 Alarm Paging option only.
- While performing this procedure, you must be logged on locally to the AMC as motosec.
- Save the backup files either on a network location that is accessible during upgrade/disaster recovery process, or removable media which is allowed by the organizations IA policies.

Procedure:

- 1 Close all applications.
- 2 Navigate to the SCADAlarm folder:
 - If you are on Windows 2008, Windows Vista, or Windows 7, open the **Start** menu and type %ALLUSERSPROFILE%\Application Data\Wonderware\SCADAlarm in the Search field. Press **Enter**.
 - If you are on Windows 2003, press **Windows icon key + R** and type %ALLUSERSPROFILE%\Application Data\Wonderware\SCADAlarm Click **OK**.
- 3 Back up the configuration files:
 - a) Press and hold the **Ctrl** key.
 - b) Select all the files with .car, and .csk extensions.
 - c) Select **SCADALRM.INI**.
 - d) Press **Ctrl + C**.
 - e) Navigate to the backup directory and press **Ctrl + V**.
- 4 Create the VoxFiles subdirectory in the backup directory.
- 5 In the SCADAlarm directory, navigate to the VoxFiles directory.
- 6 Back up the .wav files:
 - a) Press and hold the **Ctrl** key.
 - b) Select all the custom recorded .wav files and press **Ctrl+C**.
 - c) Navigate to the backup VoxFiles directory and press **Ctrl + V**.



Note: Typically, this is all of the .wav files that do not begin with **Z_**.

Backing Up the InTouch Alarm Printing Option Configuration

When and where to use: Follow the procedure below to back up the InTouch alarm printing option configuration

**Note:**

This procedure is for the AMC only.

This procedure is for systems with the FSA4000 Alarm Printing option only.

While performing this procedure, you need to be logged on locally to the AMC as motosec.

You must save the backup files either on a network location that is accessible during upgrade/disaster recovery process, or removable media which is allowed by the organization's IA policies

Procedure:

- 1 Retrieve the Alarm Printer Configuration file name:
 - a) From the **Start** menu, select **Programs/All Programs** → **Wonderware** → **InTouch** → **Alarm Printer**.
 - b) Write down the name of the Alarm Printer Configuration file that the Alarm Printer has started with.



Note: The name of the Alarm Printer Configuration file that the Alarm Printer started with can be seen in the **Alarm Printer** window title/**Alarm Printer** window title tooltip.

- c) Select **File → Exit**.
- 2 Navigate to the folder where the InTouch Alarm Printer Configuration files and Alarm Printer query batch files are located.



Note: The Alarm Printer Configuration files are files with the .ALC extension. Alarm Printer query batch files are OpenAlarmPrinterQuery.bat and RunAlarmPrinterQuery.bat. The location of these files is not defined for releases prior to ASTRO® 25 7.9 and may vary in different systems; typically it is the FSA4000 InTouch Software directory or My Documents directory (for the user that configured the Alarm Printing option. For ASTRO® 25 7.9 and later releases, the location is My Documents directory (for the user that configured the Alarm Printing option.) If the files are located in more than one directory, repeat the procedure for each directory.

- 3 Select the InTouch Alarm Printer Configuration files and the Alarm Printer query batch files. Press **Ctrl + C**.



Note: Multiple files can be selected by clicking them while holding **Ctrl** key.

- 4 Navigate to the backup directory and press **Ctrl + V**.

Backing Up the Windows Screen Resolution

When and where to use:

Follow the procedure below to back up the Windows screen resolution.



Note:

- While performing this procedure, you need to be logged on locally to the AMC as motosec, or to the ALC and consoles as secmoto.
- Save the backup files either on a network location that is accessible during upgrade/disaster recovery process or removable media which is allowed by the organizations IA policies.

Procedure:

- 1 Copy the current screen resolution:

If...	Then...
If you are on the Windows 2003 operating system,	<ol style="list-style-type: none"> 1 Right-click on the desktop and select Properties. 2 In the Display Properties dialog box appears, select the Settings tab. 3 Press Alt + PrintScreen. Click Cancel. 4 Close the Personalize window.
If you are on the Windows Vista operating system,	<ol style="list-style-type: none"> 1 Right-click on the desktop and select Personalize. 2 In the Personalization window, click Display settings. 3 Press Alt + PrintScreen. Click Cancel.
If you are on the Windows 2008 or Windows 7 operating system,	<ol style="list-style-type: none"> 1 Right-click on the desktop and select Screen Resolution. 2 Press Alt + PrintScreen. Click Cancel.

- 2 Open Wordpad:

- If you are on Windows 2003 or Windows XP, press **Ctrl + Esc**, press the **Windows icon key + R**, and type wordpad in the **Open** field. Press **Enter**.
- If you are on Windows 2008, Windows Vista, or Windows 7 system, press **Ctrl + Esc**, type wordpad in the **Search** field. Press **Enter**.

Step result: The WordPad application window appears.

- 3 Save the settings in the Wordpad file:

- a) Press **Ctrl + V** to paste the copied settings screen.

- b) Select **File → Save**. Navigate to the backup location.
- c) Enter the file name: `Screen_Resolution.rtf` and click **Save**.
- d) Select **File → Exit**.

Restoring the Wonderware License File

When and where to use: Follow the procedure below to restore the Wonderware license file.



Note:

This procedure is for Disaster Recovery.

Perform this procedure only if you were previously able to back up necessary data. If a backup is not available, refer to procedures in this manual about how to install Wonderware InTouch and Wonderware SCADAlarm license files.

While performing this procedure, you need to be logged on locally to the AMC as motosec or Administrator, if motosec is not yet defined, or to the ALC as secmoto.

The User Account Control dialog box may appear. If required, type the administrator user name and password. Click **Continue**, or **Allow**, or **OK**, or **Yes** to continue. Use the username you logged on with as the administrator user name.

Procedure:

- 1 Open the License Utility:
 - In a Windows Server 2003 system, from the **Start** menu, select **Programs → Wonderware → Common → License Utility**.
 - In a Windows Server 2008, Windows Vista, or Windows 7 system, from the **Start** menu, select **All Programs → Wonderware → Common**, right-click on **License Utility**, and select **Run as administrator**.
- 2 In the **License Utility** window, select **File → Install License File**.
- 3 When the **Open** dialog box appears, navigate to the `WWSUITE.LIC` file, select it and click **Open**.

Note: The `WWSUITE_10.1.LIC` file was backed up using *Backing Up the Wonderware InTouch License and SCADAlarm License File on page 186*.
- 4 In the **Destination Computer for Installation** dialog box, click **OK**.
- 5 Select **File → Exit**.

Restoring the SCADAlarm Configuration

When and where to use:

Follow the procedure below to restore the SCADAlarm configuration.



Note:

This procedure is for the AMC only.

This procedure is for FSA4000 Alarm Paging option customers only.

While performing this procedure, you must be logged on locally to the AMC as motosec or Administrator, if motosec is not yet defined.

Procedure:

- 1 Close all applications.
- 2 Copy the backed up SCADAlarm configuration files from the backup directory:
 - a) Navigate to the backup directory where you backed up the SCADAlarm configuration.
 - b) Press and hold the **Ctrl** key.
 - c) Select all files with `.car` and `.csk` extensions and select the **SCADALRM.INI** file.

- d) Press **Ctrl+C**.
- 3 Navigate to the SCADAlarm folder:
- If you are on Windows 2008, Windows Vista, or Windows 7, open the **Start** menu and type %ALLUSERSPROFILE%\Application Data\Wonderware\SCADAlarm in the **Search** field. Press **Enter**.
 - If you are on Windows 2003, press **Windows icon key + R** and type %ALLUSERSPROFILE%\Application Data\Wonderware\SCADAlarm in the **Open** field. Click **OK**.
- 4 Press **Ctrl + V**.
- Step result:** The file replace confirmation dialog box appears.
- 5 When the file replace confirmation dialog box appears, do the following:
- If this is a Windows 2008 system, select the **Do this for the next X conflicts** check box and click **Copy and Replace**.
 - If this is a Windows 2003 system, Click **Yes to All**.
- 6 Copy the backed up configuration files from the backup directory:
- a) Navigate to the backup directory where you backed up the SCADAlarm configuration.
 - b) Navigate to the backup **VoxFiles** directory.
 - c) Select all files and press **Ctrl + C**.
- 7 Navigate to the **VoxFiles** folder:
- If you are on Windows 2008, Windows Vista, or Windows 7, open the **Start** menu and type %ALLUSERSPROFILE%\Application Data\Wonderware\SCADAlarm\VoxFiles in the **Search** field. Press **Enter**.
 - If you are on Windows 2003, press **Windows icon key + R** and type %ALLUSERSPROFILE%\Application Data\Wonderware\SCADAlarm\VoxFiles Click **OK**.
- 8 Press **Ctrl + V**.
- 9 If the file replace confirmation dialog box appears, perform the following actions:
- If this is Windows 2008 system, select the **Do this for the next X conflicts** checkbox and click **Copy and Replace**.
 - If this is a Windows 2003 system, click **Yes to All**.

Restoring the FSA4000 Dispatch Software Configuration

When and where to use:

Follow the procedure below to restore the FSA4000 Dispatch Software configuration.



Note:

Perform this step for Disaster Recovery only if you were previously able to back up necessary data. If a backup is not available, use the *FSA4000 Dispatch Software User Guide* for instructions how to configure FSA4000 Dispatch Software.

While performing this procedure, you need to be logged on locally to the AMC as motosec or Administrator, if motosec is not yet defined, or to the ALC and consoles as secmoto.

The User Account Control dialog box may appear. If required, type the administrator user name and password. Click **Continue**, or **Allow**, or **OK**, or **Yes** to continue. Use the username you logged on with as the administrator user name.

Procedure:

- 1 Navigate to the location where you stored the ComputerNames.ini file.
- 2 Select theComputerNames.ini file and press **Ctrl + C**.

- 3 Navigate to the FSA4000 Dispatch Software configuration location on the AMC or ALC:
 - If this is Windows 2008 or Windows 7, the location is: C:\Program Files (86)\Motorola\Public Safety\Fire\Dispatch\ FSA4000_InTouch\Data
 - This is Windows 2003 or Windows Vista, the location is: C:\Program Files\Motorola\Public Safety\Fire\Dispatch\FSA4000_InTouch\Data.
- 4 Press **Ctrl + V**.
- 5 If the file replace confirmation dialog box appears, do the following:
 - If this is a Windows 2008, Windows Vista, or Windows 7 system, select the **Do this for the next X conflicts** check box and click **Copy and Replace**.
 - If this is a Windows 2003 system, click **Yes to All**.

Restoring the FSA4000 Dispatch Software Run-time Configuration

When and where to use:

Follow the procedure below to restore FSA4000 Dispatch Software run-time configuration.



Note:

This procedure is for the AMC only.

While performing this procedure, you need to be logged on locally to the AMC as motosec or Administrator, if motosec is not yet defined.

Perform this step for Disaster Recovery only if you were previously able to back up necessary data. If a backup is not available, use the *FSA4000 Dispatch Software User Guide* for instructions how to configure FSA4000 Dispatch Software.

The User Account Control dialog box may appear. If required, type the administrator user name and password. Click **Continue**, or **Allow**, or **OK**, or **Yes** to continue. Use the username you logged on with as the administrator user name.

Procedure:

- 1 To start the FSA4000 Configuration Tool, from the **Start** menu, select **Programs/All Programs → Motorola → FSA4000 Configuration Tool X.YY → FSA4000 Configuration Tool**.



Note: If the administrator password is required, enter an appropriate password for the default administrator account and click **Yes**.

Step result: The FSA4000 Configuration application opens on the screen.

- 2 Open an existing project:

If...	Then...
If the preferred project appears in the Recent projects pane,	click the link of the project name in the Recent projects pane.
If the preferred project does not appear in the Recent projects pane,	<p>perform the following actions:</p> <ol style="list-style-type: none"> 1 Select File → Open. 2 Browse to the preferred project directory. <ul style="list-style-type: none"> • The default location of the project directory on Windows Server 2003 is: C:\Program Files\Motorola\PublicSafety\Fire\FSA4000\FSA4000_xxx\Projects\"project name".

If...	Then...
	<ul style="list-style-type: none"> The default location of the project directory on Windows Server 2008 is: C:\Program Files (x86)\Motorola\PublicSafety\Fire\FSA4000\FSA4000_xxx\Projects\"project name" <p>3 Select the preferred project name (.sap file) and click Open.</p>  <p>Note: If an upgrade is needed, a dialog box appears, asking if you want to perform the upgrade. Click Yes.</p>

Step result: The selected project appears on the screen.

- 3 Click **Import AMC DB** in the **Activities** tab.
- 4 In the **Select AMC DB file** dialog box, open the configuration file:
 - a) Navigate to the network location where you backed up the FSA4000 Dispatch Software Run-Time Configuration (apparatuses configuration).
 - b) Select the **DB.CSV** file and click **Open**.

Step result: The AMC DB is imported.

- 5 Select **File → Exit**.

Restoring the FSA4000 Report Generator Configuration

When and where to use:

Follow the procedure below to restore the FSA4000 Report Generator configuration.



Note:

This procedure is for FSA4000 Alarm Printing option customers only.

While performing this procedure, you need to be logged on locally to the AMC as motosec or Administrator, if motosec is not yet defined, or to the ALC and consoles as secmoto

Perform this step for Disaster Recovery only if you were previously able to back up necessary data. If a backup is not available, use the *FSA4000 Report Generator User Guide* for instructions how to configure the Report Generator.

Procedure:

- 1 Navigate to the location where you backed up the Report Generator configuration file.
- 2 Select the **FsaRepGenConf.xml** and **FsaRepGenData.xml** files and press **Ctrl + C**.
- 3 Navigate to the FSA4000 Report Generator folder:
 - On Windows 2008, Windows Vista, or Windows 7: Open the **Start** menu and type %AllUsersProfile%\FSA4000 Report Generator in the Search field. Press **Enter**.
 - On Windows 2003: Press **Windows icon key + R** and type: %AllUsersProfile%\Application Data\FSA4000 Report Generator Click **OK**.
- 4 Press **Ctrl + V**.
- 5 If the file replace confirmation dialog box appears, do the following:
 - If this is a Windows 2008, Windows Vista, or Windows 7 system, select the **Do this for the next X conflicts** check box and click **Copy and Replace**.
 - If this is a Windows 2003 system, Click **Yes to All**.
- 6 Close the Windows Explorer.

Restoring the FSA4000 Configuration Tool Projects

When and where to use:

Follow the procedure below to restore the FSA4000 Configuration Tool projects.



Note:

This procedure is for the AMC and FSA4000 AUX I/O systems.

While performing this procedure, you need to be logged on locally to the AMC as motosec or Administrator, if motosec is not yet defined.

Perform this step for Disaster Recovery only if you were previously able to back up necessary data. If a backup is not available, refer to the *FSA4000 Configuration Tool User Guide* for instructions on how to configure FSA4000 Configuration Tool projects.

The User Account Control dialog box may appear. If required, type the administrator user name and password. Click **Continue**, or **Allow**, or **OK**, or **Yes** to continue. Use the username you logged on with as the administrator user name.

Procedure:

- 1 Close all applications.
- 2 Navigate to the network location where you backed up the **Projects** folder.
- 3 Select the **Projects** folder and press **Ctrl + C**.
- 4 Navigate to the FSA4000 folder on the AMC server:
 - On Windows 2003, go to `C:\Program Files\Motorola\PublicSafety\Fire\FSA4000\FSA4000_xxx`.
 - On Windows 2008, go to `C:\Program Files (x86)\Motorola\PublicSafety\Fire\FSA4000\FSA4000_xxx`.



Note: The `xxx` in the folder name stands for FSA4000 Configuration Tool version. If there are multiple `FSA4000_xxx` folders, select the latest version folder (a folder with the highest `xxx` value).

- 5 To delete the previous **Projects** folder, select the **Projects** folder and press **Shift + DEL**.



Note: If the User Account Control dialog box appears, but required information is not entered, the dialog box closes and the delete operation is canceled. In this case, press **Shift + DEL** again.

- 6 Press **Ctrl + V**.



Note: If the User Account Control dialog box appears, but required information is not entered, the dialog box closes and the paste operation is canceled. In this case, press **Ctrl + V** again.



Important: You must configure every FEP and RTU device in the system, using *RTU Configuration on page 139*. The procedure must be executed even if there are no changes in the project configuration.

Restoring the InTouch Alarm Printing Option

When and where to use: Follow the procedure below to restore the InTouch Alarm Printing option.

**Note:**

This procedure is for the AMC only.

This procedure is for systems with the FSA4000 Alarm Printing option only.

This procedure is for disaster recovery.

While performing this procedure, you need to be logged on locally to the AMC as motosec.

Procedure:

- 1 Navigate to the backup location where InTouch Alarm Printing configuration files are stored.
- 2 Select the InTouch Alarm Printer Configuration files and the Alarm Printer query batch files. Press **Ctrl + C**.

**Note:**

The Alarm Printer Configuration files are files with the .ALC extension. Alarm Printer query batch files are OpenAlarmPrinterQuery.bat and RunAlarmPrinterQuery.bat.

Multiple files can be selected by clicking them while holding **Ctrl** key.

- 3 Navigate to the folder where the InTouch Alarm Printer Configuration files and Alarm Printer query batch files are located.



Note: The location of these files is not defined for releases prior to ASTRO® 25 7.9 and may vary in different systems; typically it is the FSA4000 InTouch Software directory or My Documents directory (for the user that configured the Alarm Printing option. For ASTRO® 25 7.9 and later releases, the location is My Documents directory (for the user that configured the Alarm Printing option.) If the files are located in more than one directory, repeat the procedure for each directory.

- 4 Press **Ctrl + V** to paste the files.
- 5 If the file replace confirmation dialog box appears, do the following:
 - If this is a Windows 2008 system, select the **Do this for the next X conflicts** check box and click **Copy and Replace**.
 - If this is a Windows 2003 system, Click **Yes to All**.

Restoring the Local Hosts File

When and where to use:

Follow the procedure below to restore the local hosts file.

**Note:**

This procedure is for Disaster Recovery only: perform this step only if you were previously able to back up necessary data. Otherwise, follow the procedure [Configuring the Local Hosts File on page 124](#).

This procedure is for K-core systems only.

This procedure is NOT for MCC 7500 Dispatch Console and CENTRACOM Gold Elite Dispatch Console.

While performing this procedure, you need to be logged on locally to the AMC as motosec or Administrator, if motosec is not yet defined, or to the ALC as secmoto.

The User Account Control dialog box may appear. If required, type the administrator user name and password. Click **Continue**, or **Allow**, or **OK**, or **Yes** to continue. Use the username you logged on with as the administrator user name.

Procedure:

- 1 Navigate to the network location where you backed up the local hosts file.
- 2 Click the hosts file and press **Ctrl + C**.
- 3 Navigate to the %SystemRoot%\system32\drivers\etc folder on the AMC server and press **Ctrl + V**.
- 4 If the file replace confirmation dialog box appears, do the following:

- If this is a Windows 2008, Windows Vista, or Windows 7 system, click **Copy and Replace**.
- If this is a Windows 2003 system, click **Yes to All**.



Note: If any information about the user access permissions appears, click **Continue**.

Restoring NTP

When and where to use:

Follow the procedure below to restore the NTP configuration.



Note:

This procedure is for Disaster Recovery only. Perform this step only if you were previously able to back up necessary data. Otherwise, follow the procedure [Configuring Network Time Protocol \(NTP\) on page 125](#).

This procedure is for K-core systems only.

Applicable only if a third-party NTP time source is available.

While performing this procedure, must be logged on locally to the AMC as motosec or Administrator, if motosec is not yet defined, or to the ALC as secmoto.

The User Account Control dialog box may appear. If required, type the administrator user name and password. Click **Continue**, or **Allow**, or **OK**, or **Yes** to continue. Use the username you logged on with as the administrator user name.

Procedure:

1 Open the Date and Time window:

- If the operating system is Windows 2008, from the **Start** menu, select **Control Panel**. Click **Clock, Region and Language**. Click **Date and Time**.
- If the operating system is Windows 7, from the **Start** menu, click **Control Panel**. Click **Clock, Language, and Region**, and click **Date and Time**. If the Control Panel is in classic view, click **Control Panel Home** first.
- If the operating system is Windows Vista, from the **Start** menu, click **Control Panel**. Double-click **Date and Time**. If the Control Panel is in classic view, click **Control Panel Home** first.

2 In the Date and Time window, select the Internet Time tab. On all operating systems except Windows 2003, click **Change settings....**



Note: If the User Account Control dialog box appears, click **Continue**, or provide the administrator user name and password and click **Yes**.

3 In the Internet Time Settings window, check or uncheck the **Synchronize with an Internet time server** check box, according to the NTP configuration backup file (`NTP_Configuration.rtf`).

Step result: The Server drop-down list is enabled.

4 Type the IP address of the NTP02 server, in the **Server** field.

5 If the **Synchronize with an Internet time server** check box is checked, type the IP address of the NTP02 server, in the **Server** field, according to the NTP configuration backup file (`NTP_Configuration.rtf`).

6 Click **OK**.

Step result: The Internet Time Settings window closes.

7 Click **OK**.

Step result: The Date and Time window closes

Recovering the FSA4000 Front-End Processor (FEP) and FSA4000 Remote Terminal Unit (RTU)

When and where to use:

Follow the process below to recover the FSA4000 FEP and FSA4000 Remote Terminal Unit (RTU).

Process:

- 1 Configure the FSA4000 FEP software. See [Configuring the FSA4000 FEP Software for RTU Configuration on page 140](#).



Note: For complete FEP configuration instructions, see the *FSA4000 Configuration Tool User Guide*.

- 2 Install the new firmware version on the ACE36000 units. See [Installing a New Firmware Version on ACE3600 Units for RTU Configuration on page 142](#).

Recovering the FSA4000 Auxiliary Input and Output (Aux I/O) Software

When and where to use:

Follow the process below to recover the FSA4000 Aux I/O.



Note: Perform the steps in this process only if the device is still accessible and the option or feature is in use.

Process:

- 1 Back up the FSA4000 Configuration Tool projects. See [Backing Up the FSA4000 Configuration Tool Projects on page 184](#).
- 2 Install the FSA4000 Configuration Tool. See [Installing the FSA4000 Configuration Tool on page 98](#).
- 3 Install the FSA4000 Configuration Tool CAD Interface License. See [Installing the FSA4000 Configuration Tool CAD Interface License on page 100](#).
- 4 Install the FSA4000 Configuration Tool Apparatus License. See [Installing the FSA4000 Configuration Tool Apparatus License on page 102](#).
- 5 Install the FSA4000 Configuration Tool Aux I/O License. See [Installing the FSA4000 Configuration Tool Aux I/O License on page 131](#).
- 6 Install the ACE3600 System Tools Suite (STS). See [Installing the ACE3600 System Tools Suite \(STS\) on page 105](#).
- 7 Install the ACE3600 System Tools Suite Service Pack. See [Installing the ACE3600 System Tools Suite Service Pack on page 105](#).
- 8 Install the FSA4000 Configuration Tool Upgrade. See [Installing the FSA4000 Configuration Tool Upgrade on page 106](#).
- 9 Install the FSA4000 Core Applications. See [Installing FSA4000 Core Applications on page 108](#).
- 10 Create the FSA4000 Configuration Tool projects. Refer to the *FSA4000 Configuration Tool User Guide*.
- 11 Restore the FSA4000 Configuration Tool projects. See [Restoring the FSA4000 Configuration Tool Projects on page 196](#).
- 12 Configure the FSA4000 Aux I/O. See [Configuring the FSA4000 Aux I/O on page 132](#).
- 13 Configure the FSA4000 Apparatuses. See [Configuring the FSA4000 Apparatuses on page 118](#).
- 14 Connect the FSA4000 FEP to a serial printer. See [Connecting the FSA4000 FEP to a Serial Printer on page 133](#).

- 15 Connect the FSA4000 FEP to a Hyper Terminal. See [Connecting the FSA4000 FEP to a Hyper Terminal on page 135](#).
- 16 Connect the FSA4000 FEP to the Console Aux I/O Server. See [Connecting the FSA4000 FEP to the Console Aux I/O Server on page 137](#).

FSA4000 Audio Control Tone (ACT) Module

For disaster recovery, load an adequate number of tones to the ACT module. See [Configuring the ACT on page 143](#).



Note: Installation, configuration, and operation information for the ACT module can be found in the *FSA4000 Audio Control Tone (ACT) Module Owner's Manual*.

Recovering FSA4000 Client Software Cohabitation on a Console

When and where to use: Perform the process below to recover the client software cohabitation on a console.

Process:

- 1 Back up the local hosts file. See procedure [Backing Up the Local Hosts File on page 183](#).
- 2 Back up the NTP configuration. See [Backing Up the NTP Configuration on page 183](#).
- 3 Back up the Wonderware license file. See [Backing Up the Wonderware InTouch License and SCADAlarm License File on page 186](#).
- 4 Back up the FSA4000 Report Generator configuration. See [Backing Up the FSA4000 Report Generator Configuration Files on page 186](#).
- 5 Back up the FSA4000 Dispatch Software configuration. See [Backing Up the FSA4000 Dispatch Software Configuration on page 187](#).
- 6 Back up the Windows screen resolution. See [Backing Up the Windows Screen Resolution on page 191](#)
- 7 Install Microsoft Windows Vista Business Edition with SP2 or Microsoft Windows 7 with SP1, using MOSI. See [Installing Windows Server Using MOSI on page 74](#).



Note: If disaster recovery requires hardware replacement, it should be done at this stage.

- 8 Configure the Windows operating system. See [Configuring the Windows Operating System on page 77](#).
- 9 Install Wonderware InTouch. See [Installing Wonderware InTouch on page 84](#).
- 10 Install the FSA4000 users and groups. See [Installing FSA4000 Users and Groups on page 90](#).
- 11 Install the InTouch configuration. See [Installing the InTouch Configuration on page 91](#).
- 12 Install the FSA4000 Dispatch Software. See [Installing the FSA4000 Dispatch Software Application on page 93](#).
- 13 Install the FSA4000 Report Generator. See [Installing the FSA4000 Report Generator on page 96](#).
- 14 Install Adobe Reader by following the instructions provided with the ASTRO® 25 system documentation media. Your system must have Adobe® Reader® and a web browser installed to access the documentation.
- 15 Install MOTOPATCH. See [Installing Patches from the MOTOPATCH for Windows OS CD on page 109](#).



Note: This requirement does not apply to K-core systems.

- 16 Install MOTODST locally. See [Installing MOTODST Locally on page 111](#).
- 17 (Optional) Perform Windows supplemental CD configuration, if required by your organization's policies. Refer to "Applying Device-Specific Settings Using the Windows Supplemental CD" in the *Windows Supplemental Configuration* manual.



Note: The procedure is mandatory for K-core systems. For all other systems, you may decide NOT to perform this procedure to avoid the lengthy reboot time. However, it must be acceptable within your organizations policy to rely on the configuration being provided by Group Policy Objects on the domain controllers.

- 18 Restore the Wonderware License file. See [Restoring the Wonderware License File on page 192](#).
- 19 Restore the FSA4000 Dispatch Software configuration. See [Restoring the FSA4000 Dispatch Software Configuration on page 193](#).
- 20 Restore the FSA4000 Report Generator configuration. See [Restoring the FSA4000 Report Generator Configuration on page 195](#).
- 21 Configure the Alerting Center Computers. See [Configuring the FSA4000 Alerting Center Computers on page 118](#).
- 22 If no backup of the previous local hosts file is available, configure the local hosts file. See [Configuring the Local Hosts File on page 124](#).
- 23 If no backup of the previous NTP configuration is available, configure the NTP. See [Configuring Network Time Protocol \(NTP\) on page 125](#).
- 24 Restore the local hosts file. See [Restoring the Local Hosts File on page 197](#).
- 25 Restore the NTP configuration. See [Restoring NTP on page 198](#).
- 26 Load the FSA4000 InTouch database. See [Loading the FSA4000 InTouch Database on page 121](#).
- 27 Start the FSA4000 Dispatch Software. See [Starting the FSA4000 Dispatch Software on page 126](#).

Appendix

A

FSA4000 ARTA Kit

The FSA4000 ARTA Kit for ACE3600 (FLN4233A) enables the user to install the ARTA feature in ACE3600 Remote Terminal Units (RTU) for FSA4000 fire stations. Each kit includes a bracket, a Radio Interface Box (RIB), and cables.

ARTA Receive Mode Only Voice Radio Installation

The fire station XTL2500/XTL5000 voice radio (not supplied) can be mounted in the RTU housing, or outside of the housing. Follow the installation instructions in the *ACE3600 RTU Owner's Manual*.

If you choose to mount it inside the housing on the chassis, position it below the supplied data radio, pointing in the opposite direction of the data radio. See [Figure 33: ARTA Kit Installed on ACE3600 Chassis on page 207](#).

Installing the radio requires the following:

- 1 Hardware kit (FHN6895A) (not supplied)
- 2 Antenna cable (FKN8437A) (not supplied)
- 3 Power cable (FKN8436A) (supplied)

Installing the ARTA Kit

When and where to use:

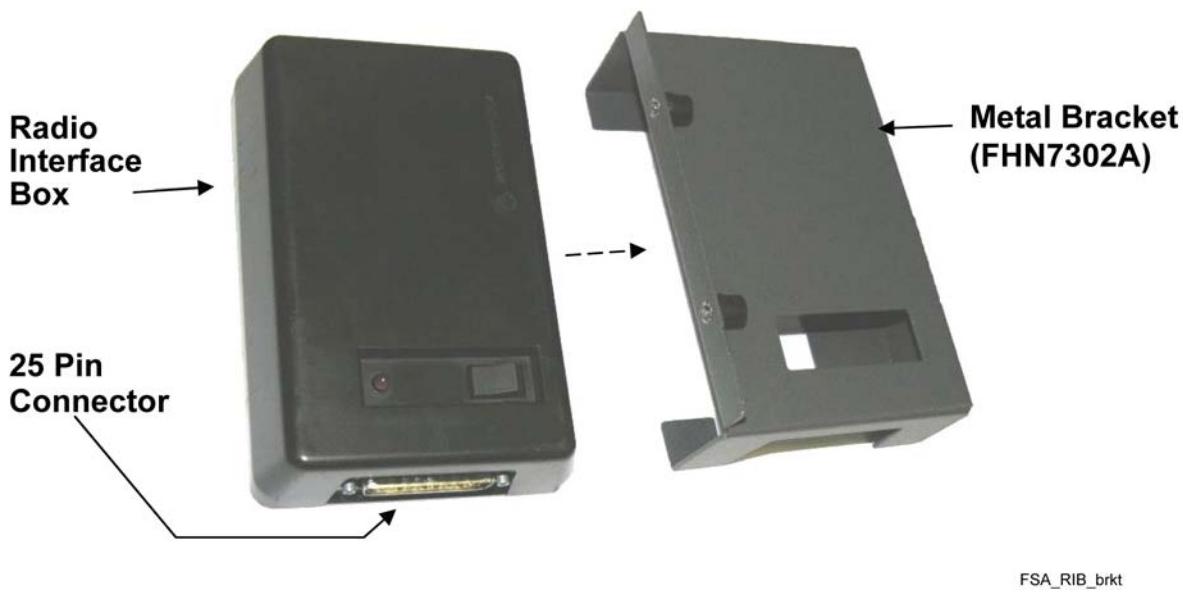


Important: When connecting to an auxiliary output on the ACE3600 RTU power supply module, make sure that the voltage is appropriate for your radio/unit. Note that AUX 1A and AUX 1B are 12 V DC by default. AUX 2A and AUX 2B must be configured to 12 V.

Follow the procedure below to install the ARTA kit.

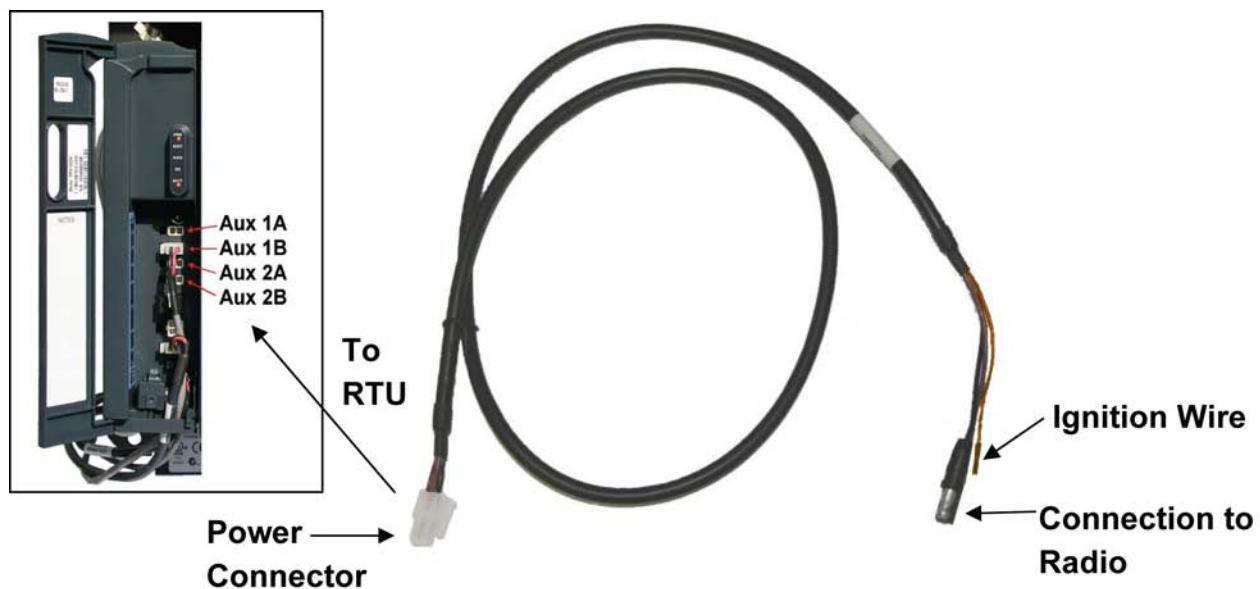
Procedure:

- 1 Insert the Radio Interface Box (RIB) (RLN4008E) into the metal bracket (FHN7302A), so that the LED and switch are visible in the square opening. See [Figure 28: Radio Interface Box \(RIB\) and Metal Bracket on page 204](#) below.

Figure 28: Radio Interface Box (RIB) and Metal Bracket

FSA_RIB_brkt

- 2 Mount the bracket with RIB on the RTU chassis, to the right of the I/O modules (in place of the 6th and 7th I/O module), using the two built-in screws. Make sure that the RIB's LED and switch are facing towards the I/O modules, the 15 pin connector is on top, and the 25 pin is on the bottom. See [Figure 33: ARTA Kit Installed on ACE3600 Chassis on page 207](#).
- 3 Connect the 25 pin connector of the “RIB to radio” cable (FKN8614A) ([Figure 32: RIB to Radio Cable on page 206](#)) to the 25 pin connector on the bottom of the RIB (see [Figure 28: Radio Interface Box \(RIB\) and Metal Bracket on page 204](#)).
- 4 Connect the radio accessory connector of the “RIB to radio” cable ([Figure 32: RIB to Radio Cable on page 206](#)) to the accessory connector on the voice radio. See [Figure 33: ARTA Kit Installed on ACE3600 Chassis on page 207](#).
- 5 Connect the ignition pin on the “RIB to radio” cable ([Figure 32: RIB to Radio Cable on page 206](#)) to the free red wire on the DC Power cable (FKN8436A) ([Figure 29: DC Power Cable on page 204](#)).

Figure 29: DC Power Cable

FSA_DC_Power_Cable

- 6 Connect the white power connector on the DC power cable (FKN8436A) (see [Figure 29: DC Power Cable on page 204](#)) to an auxiliary output on the RTU's power supply module. Connect the other side of the cable to the Power connector on the radio.
- 7 Connect the 15 pin connector of the "RIB to RTU" cable (FKN8612A) (see [Figure 30: RIB to RTU Cable on page 205](#)) to the 15 pin connector at the top of the RIB. Connect the other end of the cable (RJ45) to the serial user port on the RTU's CPU module. To identify the user port, use the FSA4000 Configuration Tool (check the port layout in the Customize screen or in the System Report).

Figure 30: RIB to RTU Cable



FSA_RIB_to_RTU_cable

- 8 Connect the end of the RIB power cable (FKN8613A) (see [Figure 31: RIB Power Cable on page 206](#)) to the connector at the top of the RIB (and next to the 15 pin connector). Connect the white end of the power cable to an auxiliary output on the RTU's power supply module.

Figure 31: RIB Power Cable

FSA_RIB_Power_Cable

- 9 The black part of the “RIB to radio” cable (see [Figure 32: RIB to Radio Cable on page 206](#)) ends with two wires: one red and one black. Connect the red wire to the SIG IN connector of the ACT module. Connect the black wire to the GND connector of the ACT module. (See the connections in the top left-hand corner of [Figure 33: ARTA Kit Installed on ACE3600 Chassis on page 207](#)). For more information on the ACT module, see the *FSA4000 ACT Module Owner’s Manual*.

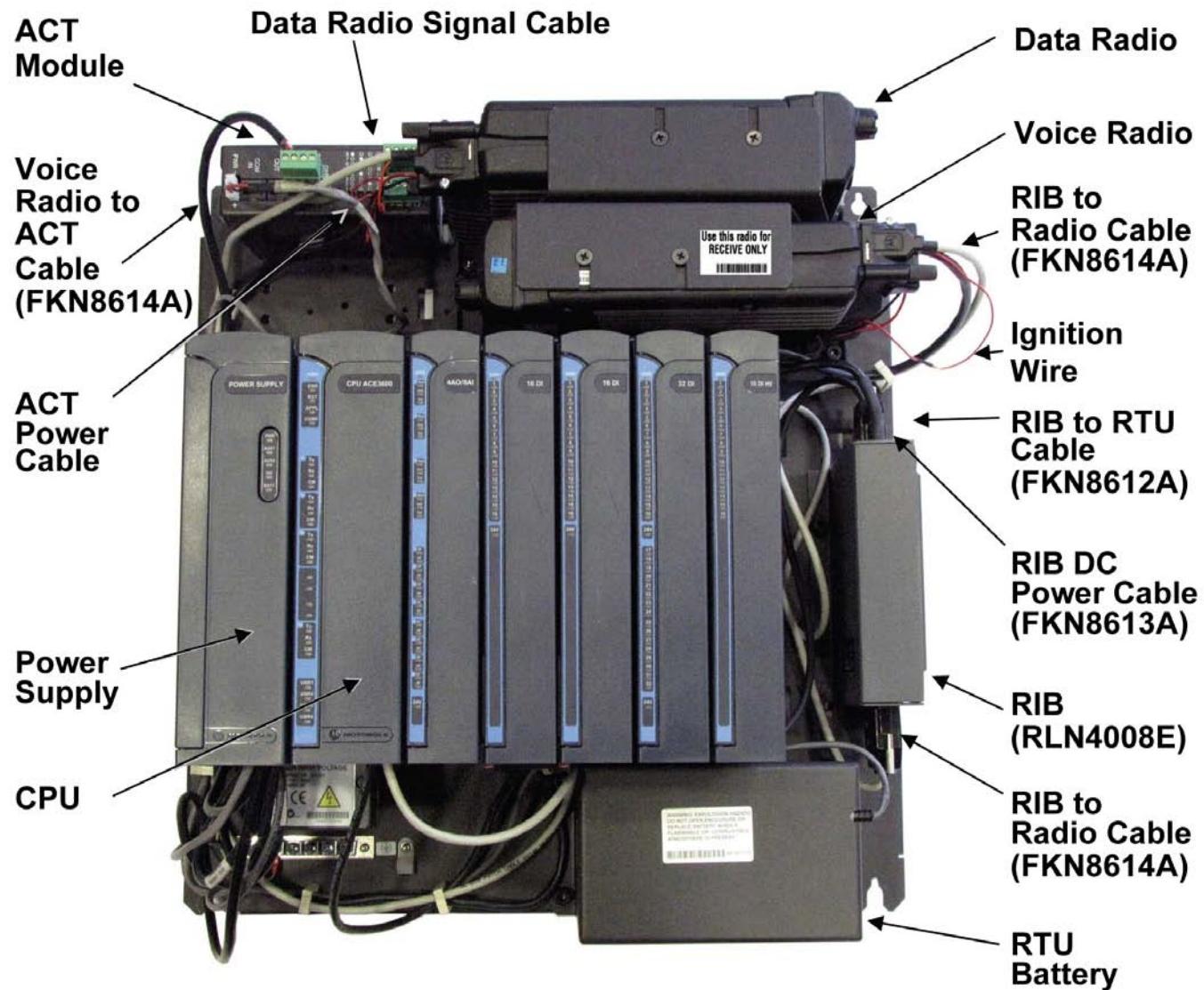
Figure 32: RIB to Radio Cable

FSA_RIB_to_radio_cable

RTU ARTA Connections

Before turning on the power, make sure that all RTU connections are correct (for example, antenna cable, data radio cables), as described in the *ACE3600 RTU Owner's Manual*. See [Figure 33: ARTA Kit Installed on ACE3600 Chassis on page 207](#).

Figure 33: ARTA Kit Installed on ACE3600 Chassis



FSA_ARTA_on_ACE3600

